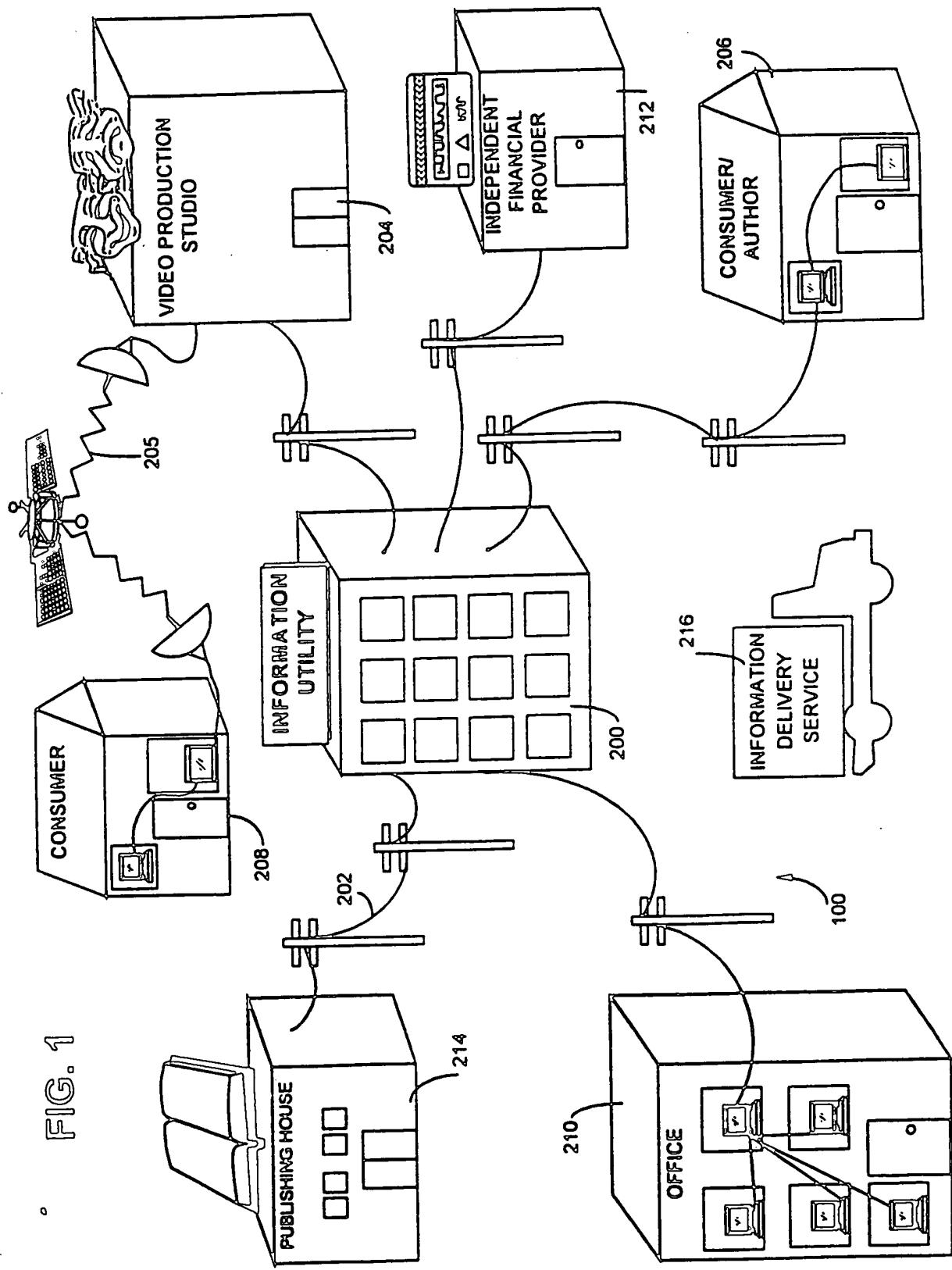


FIG. 1



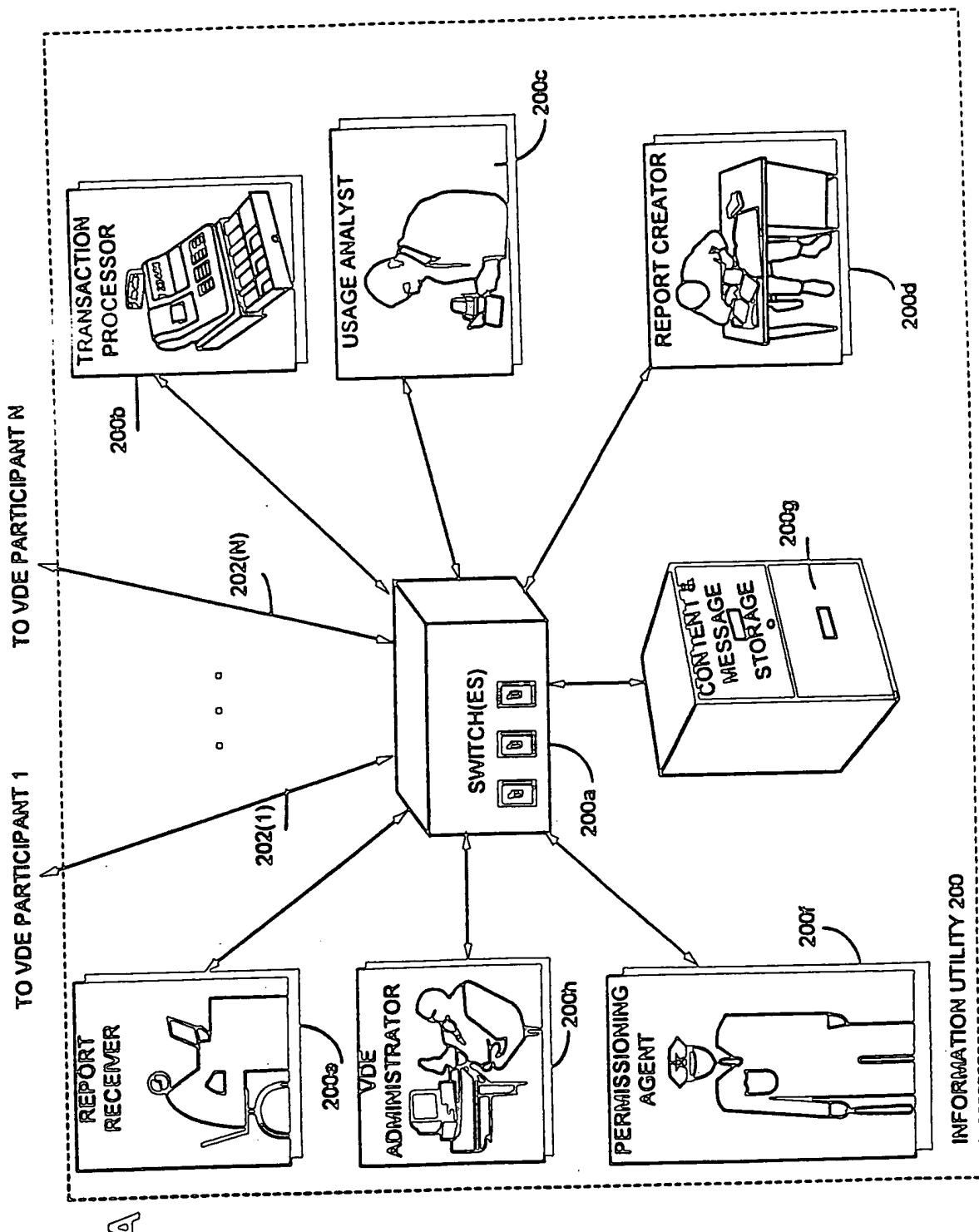
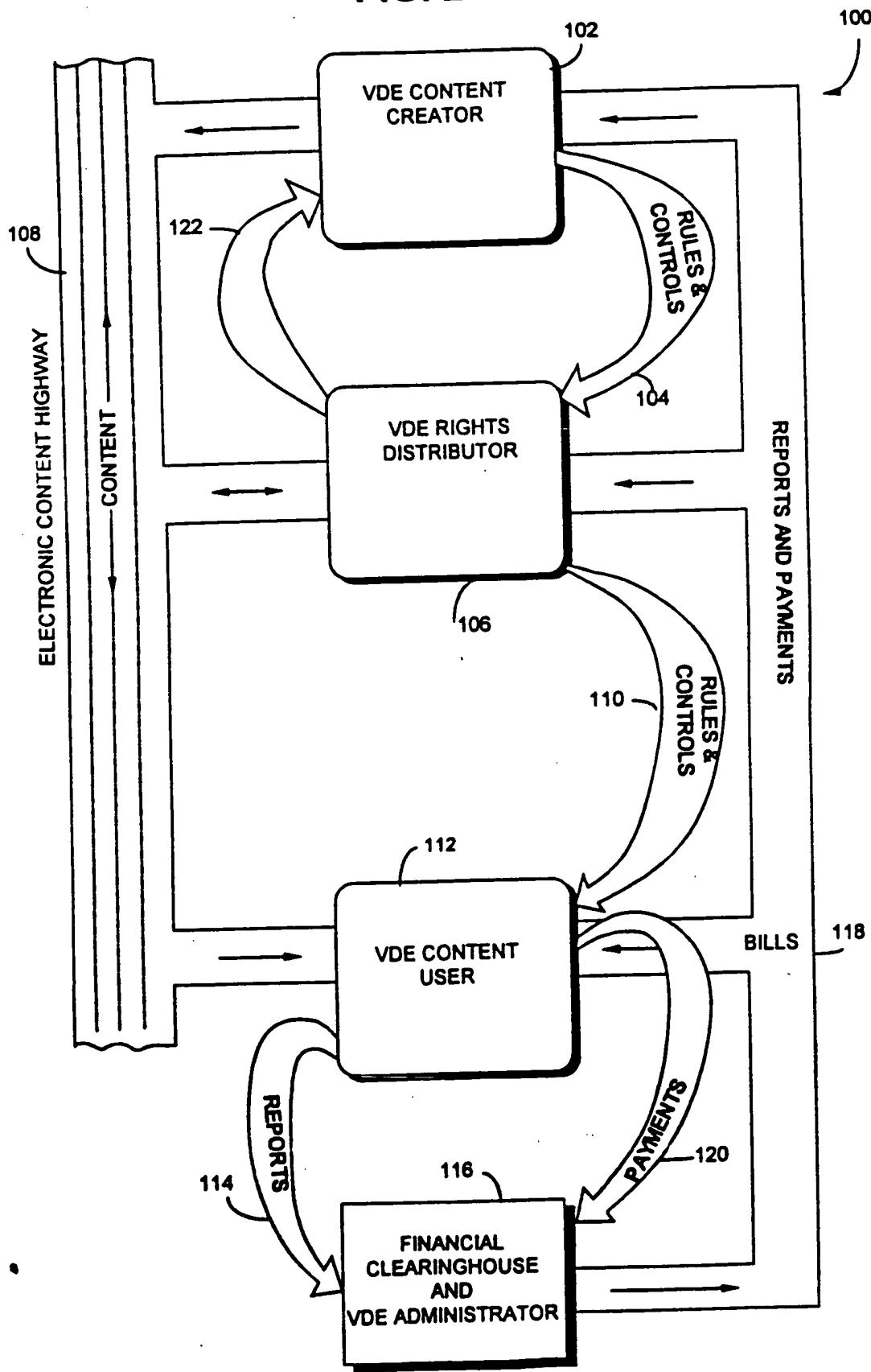
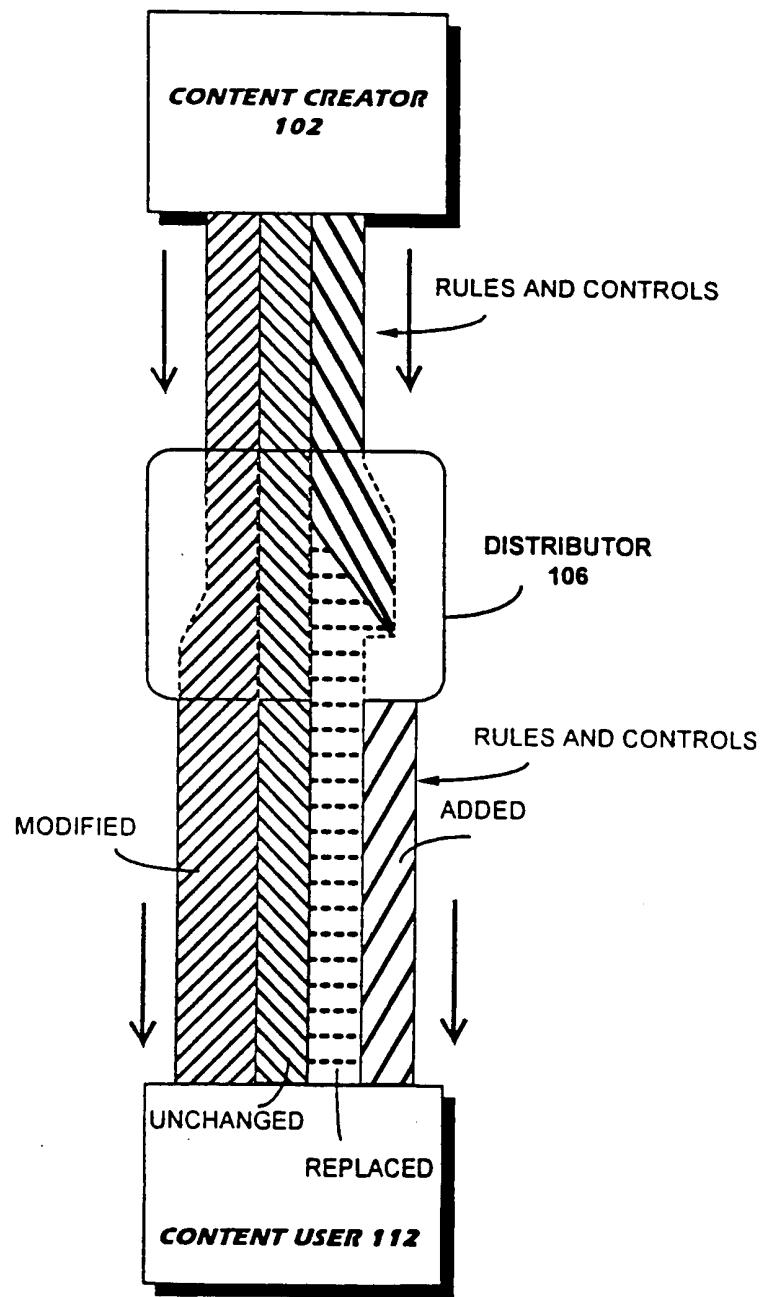


FIG. 1A

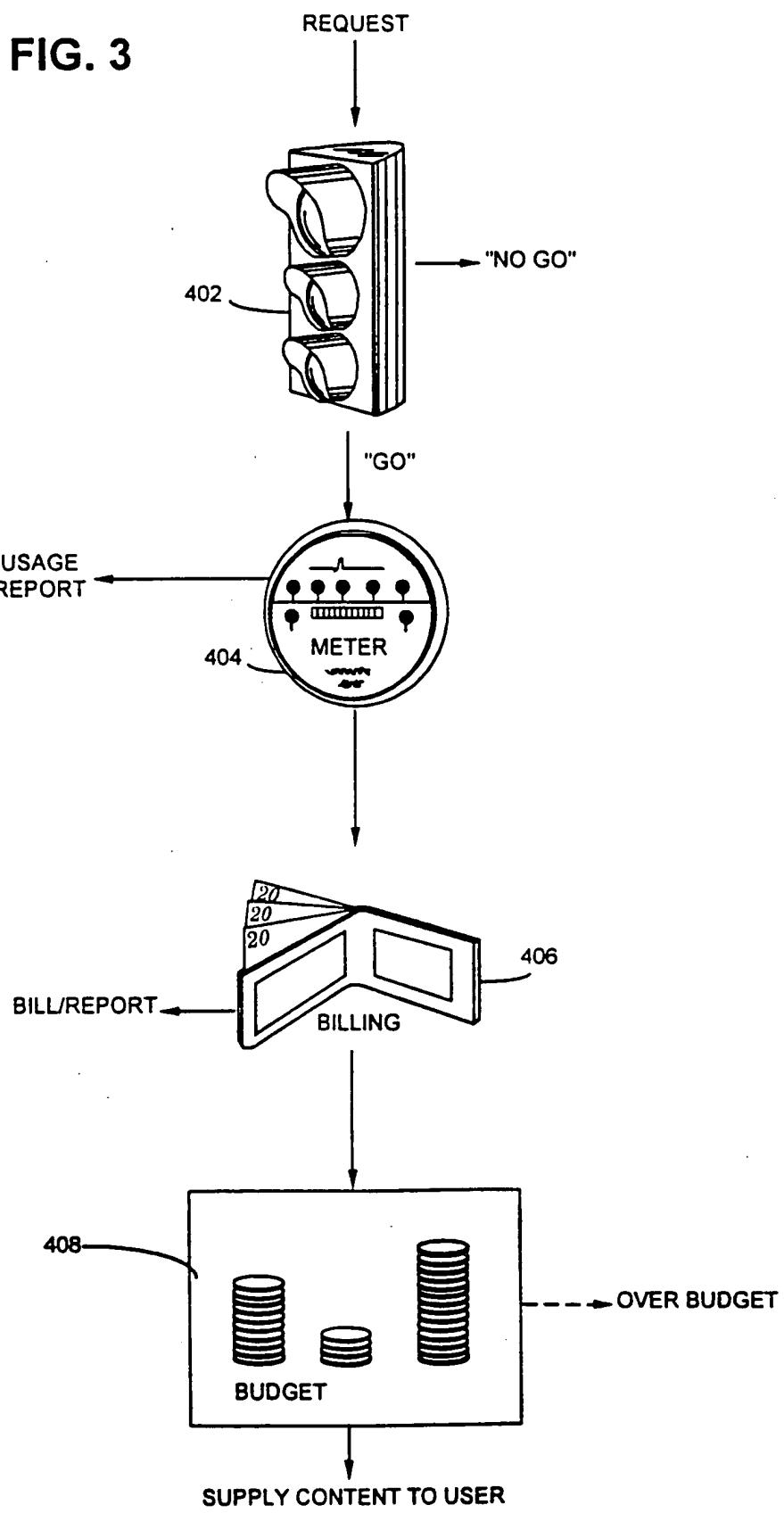
FIG. 2

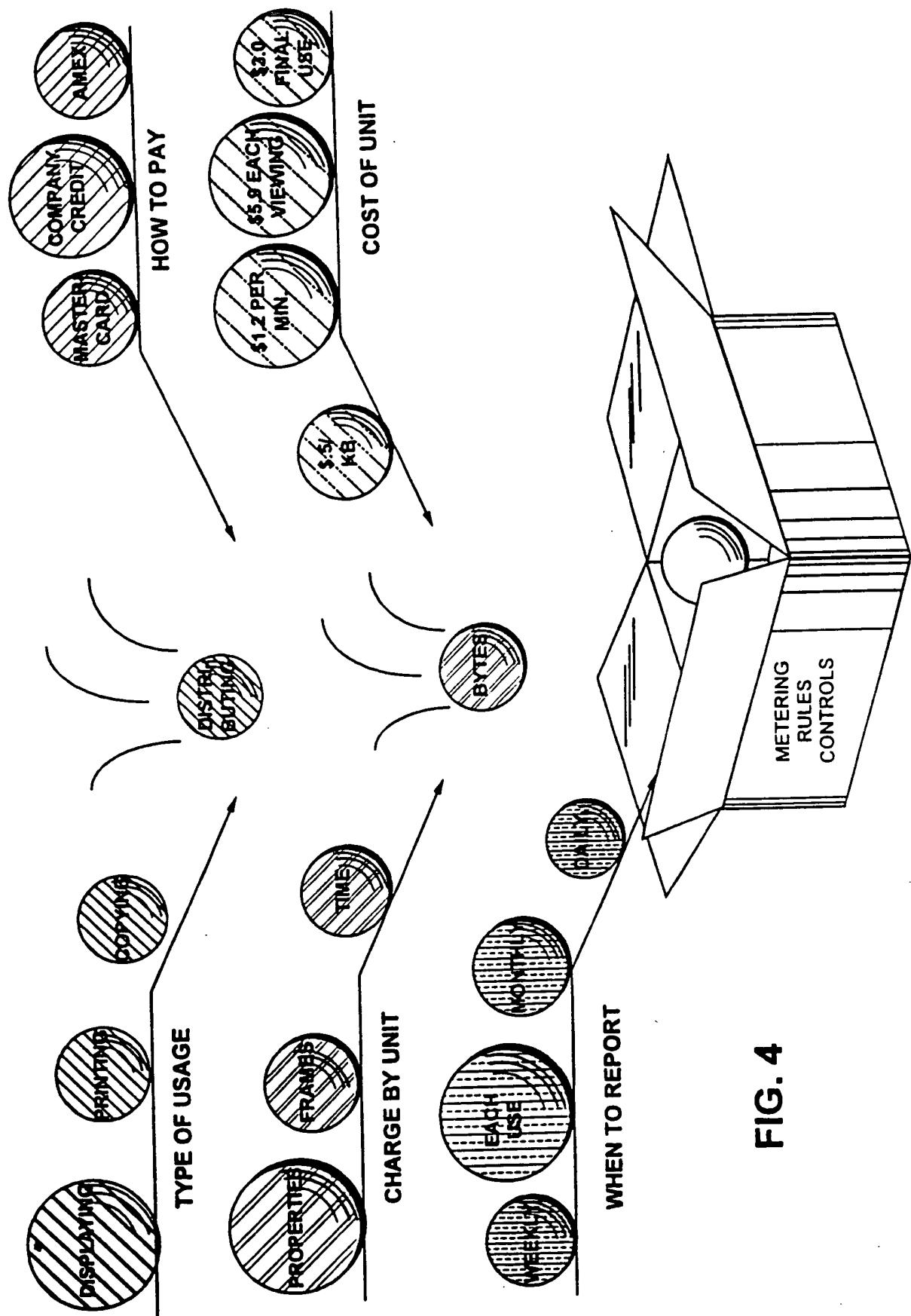


**FIG. 2A**



**FIG. 3**





**FIG. 4**

**FIG. 5A**

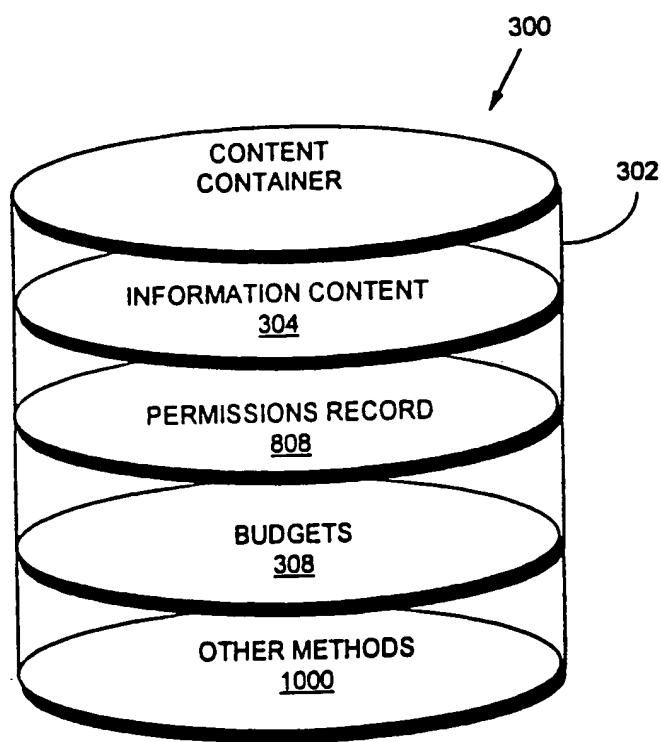
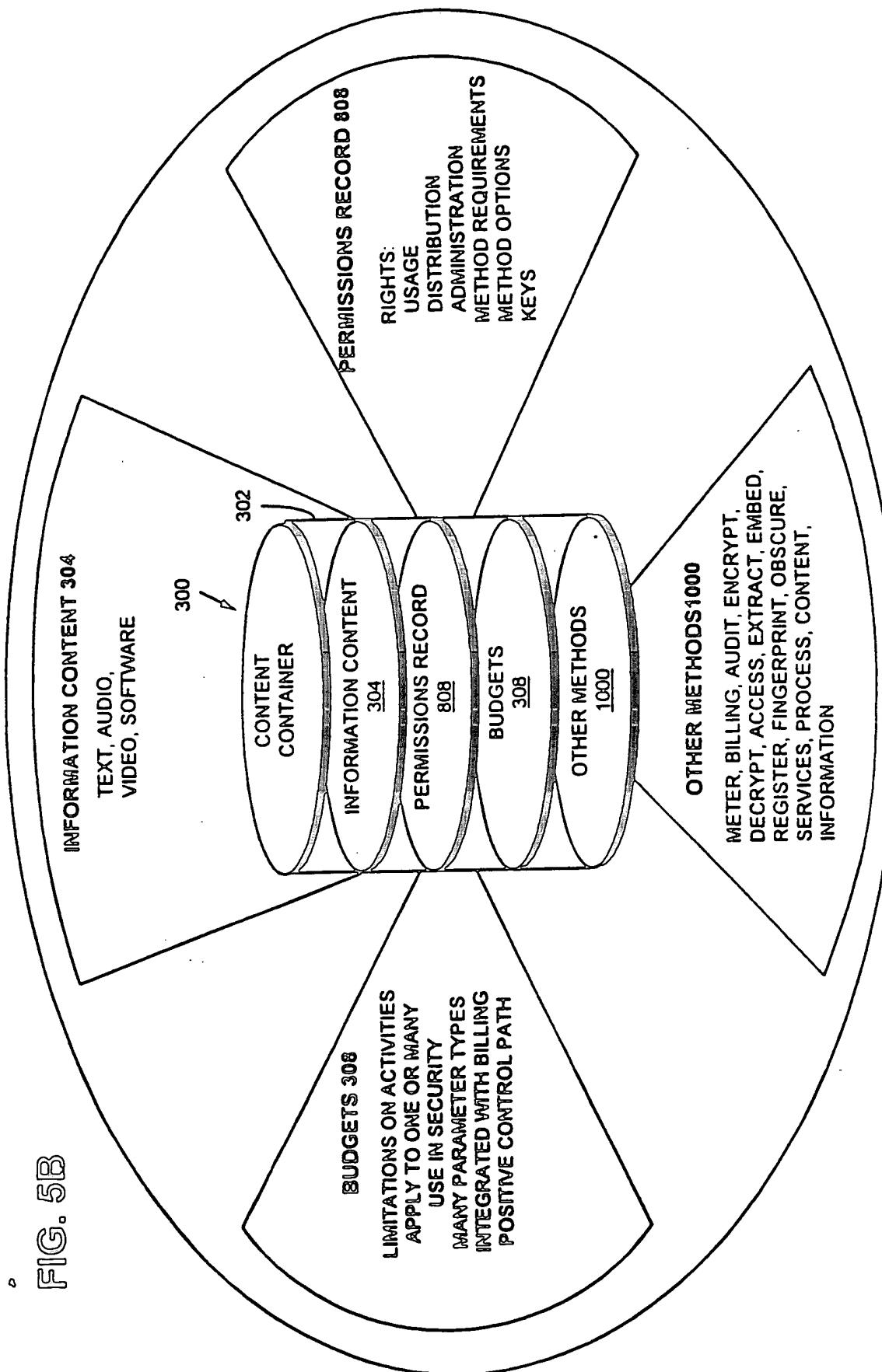
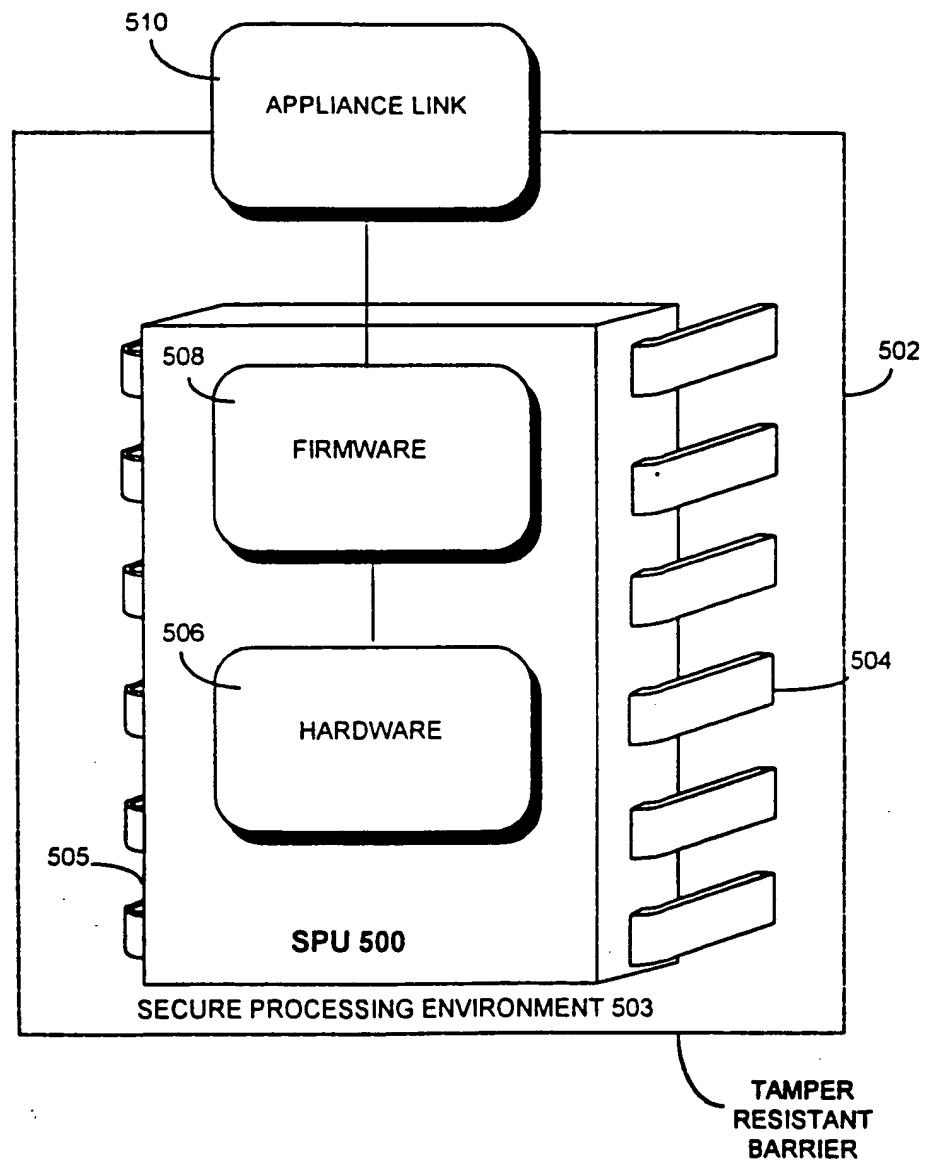


FIG. 5B



**FIG. 6**



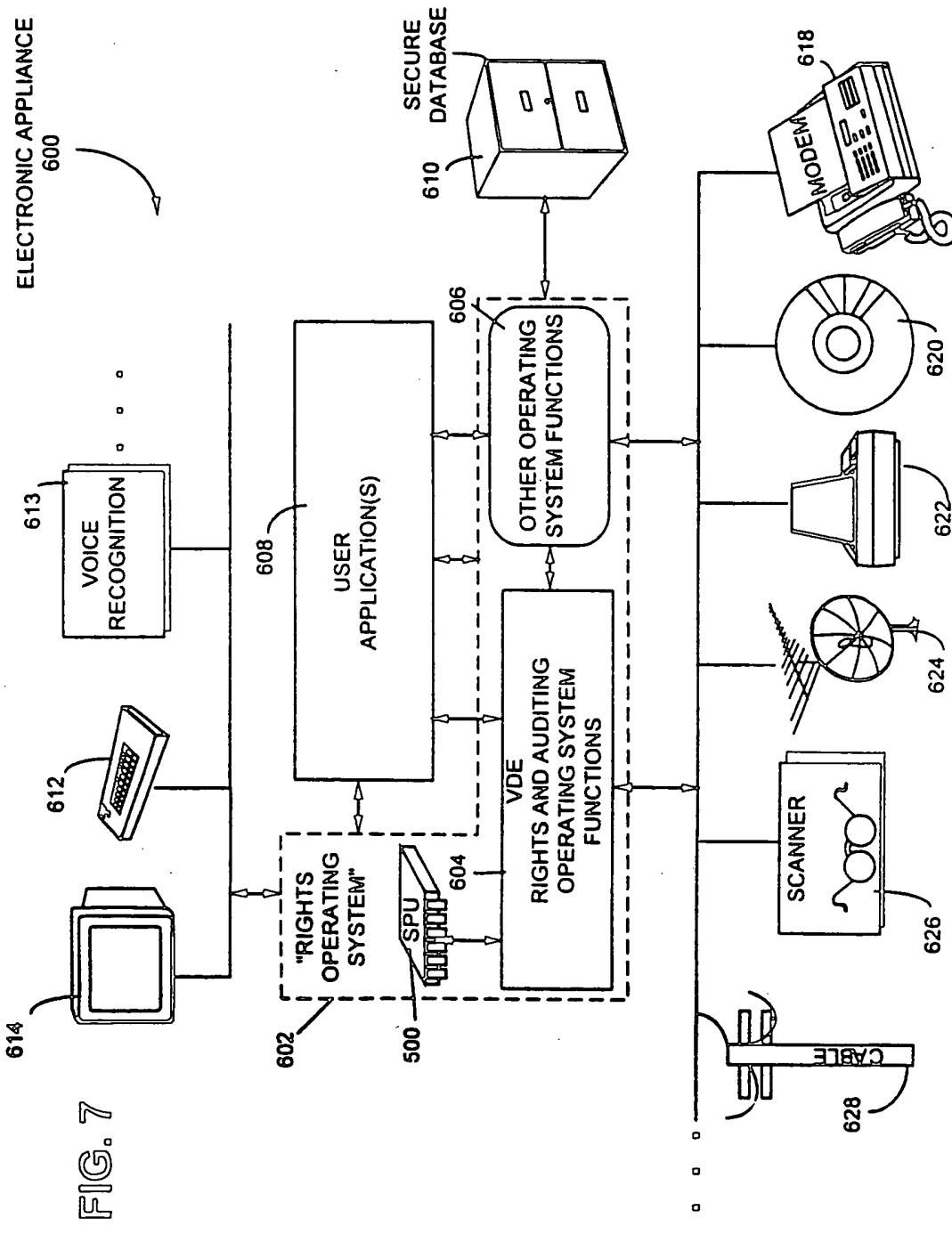


FIG. 8 ELECTRONIC APPLIANCE 600  
("VDE NODE")

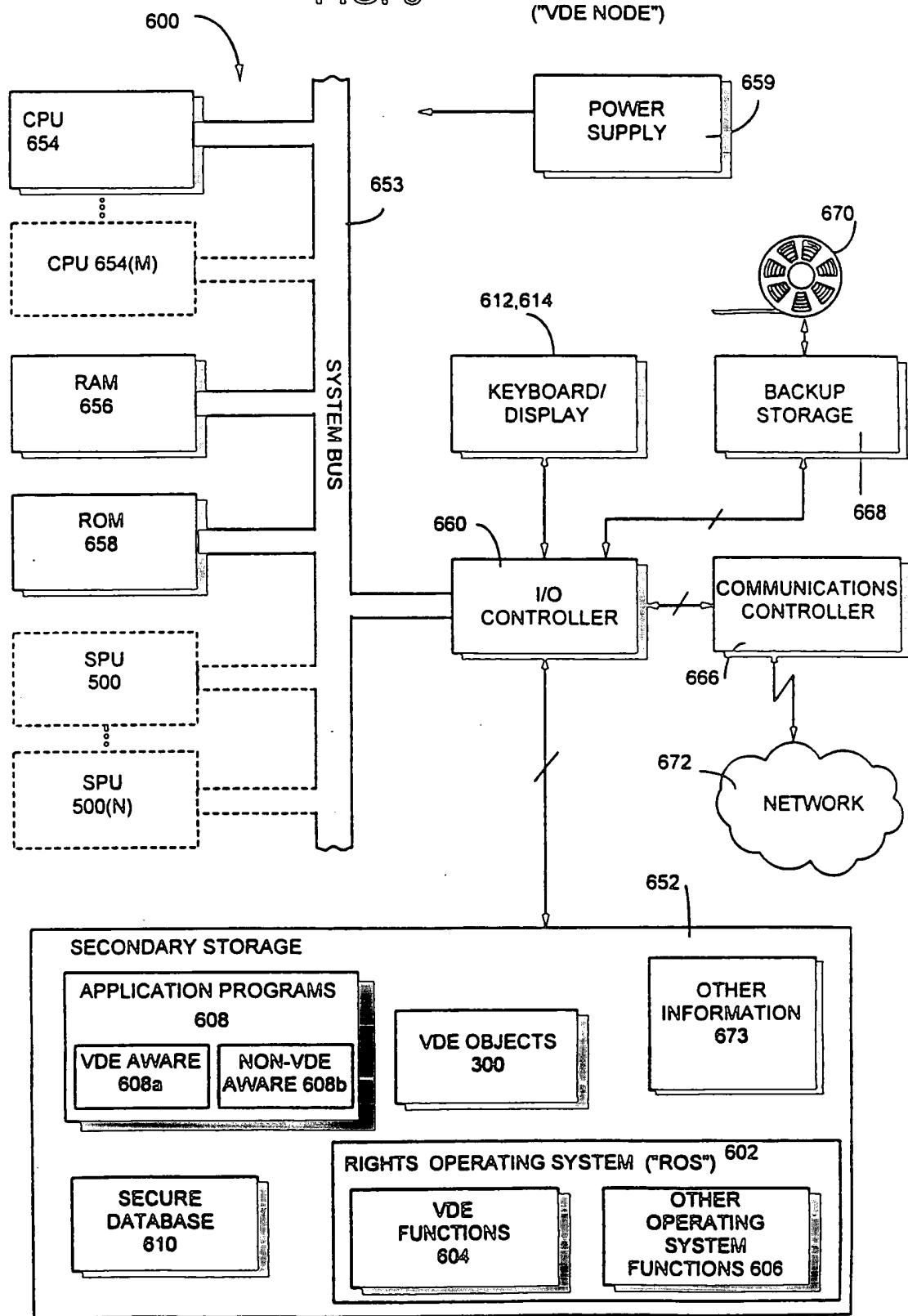
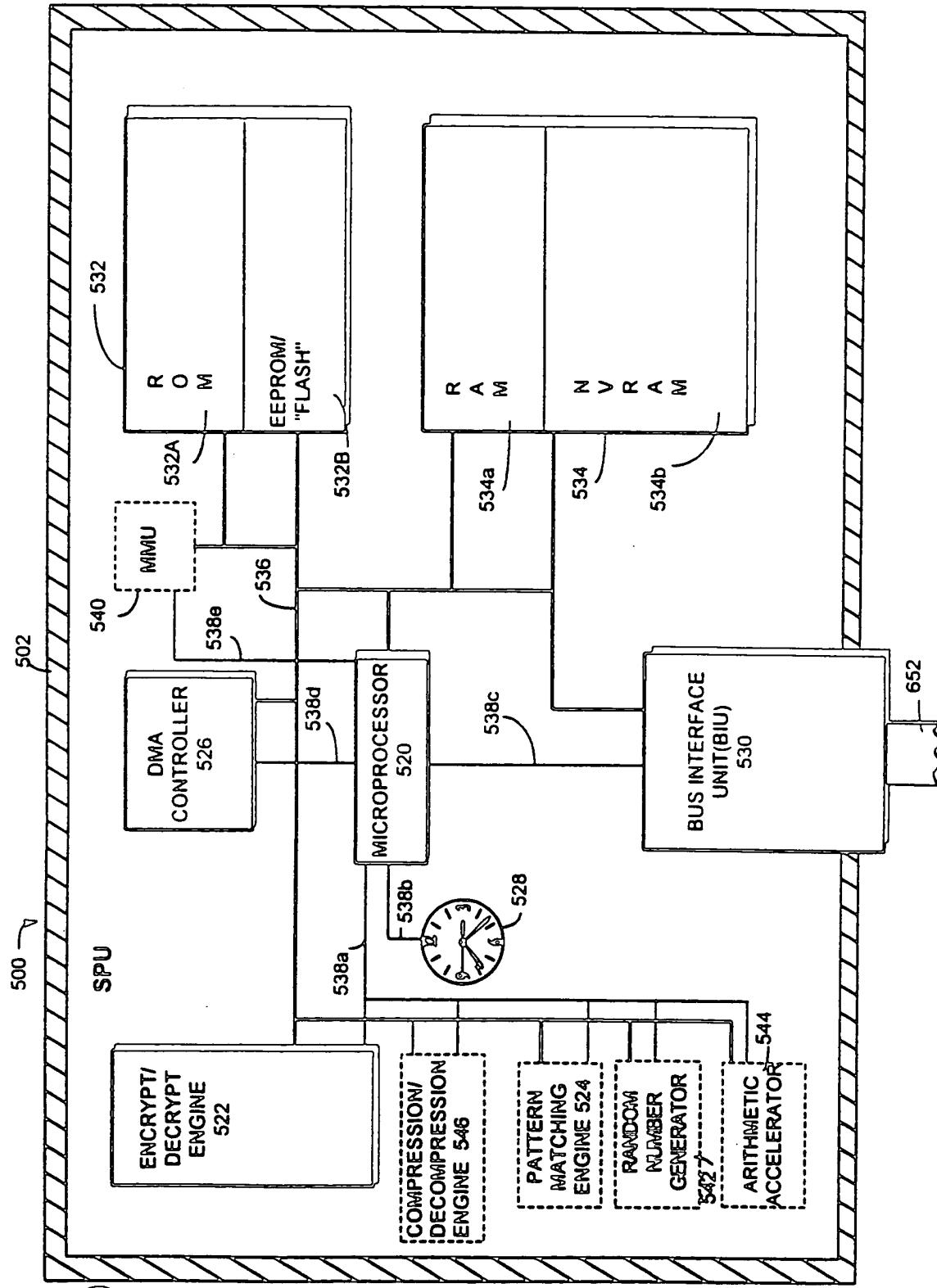


FIG. 9



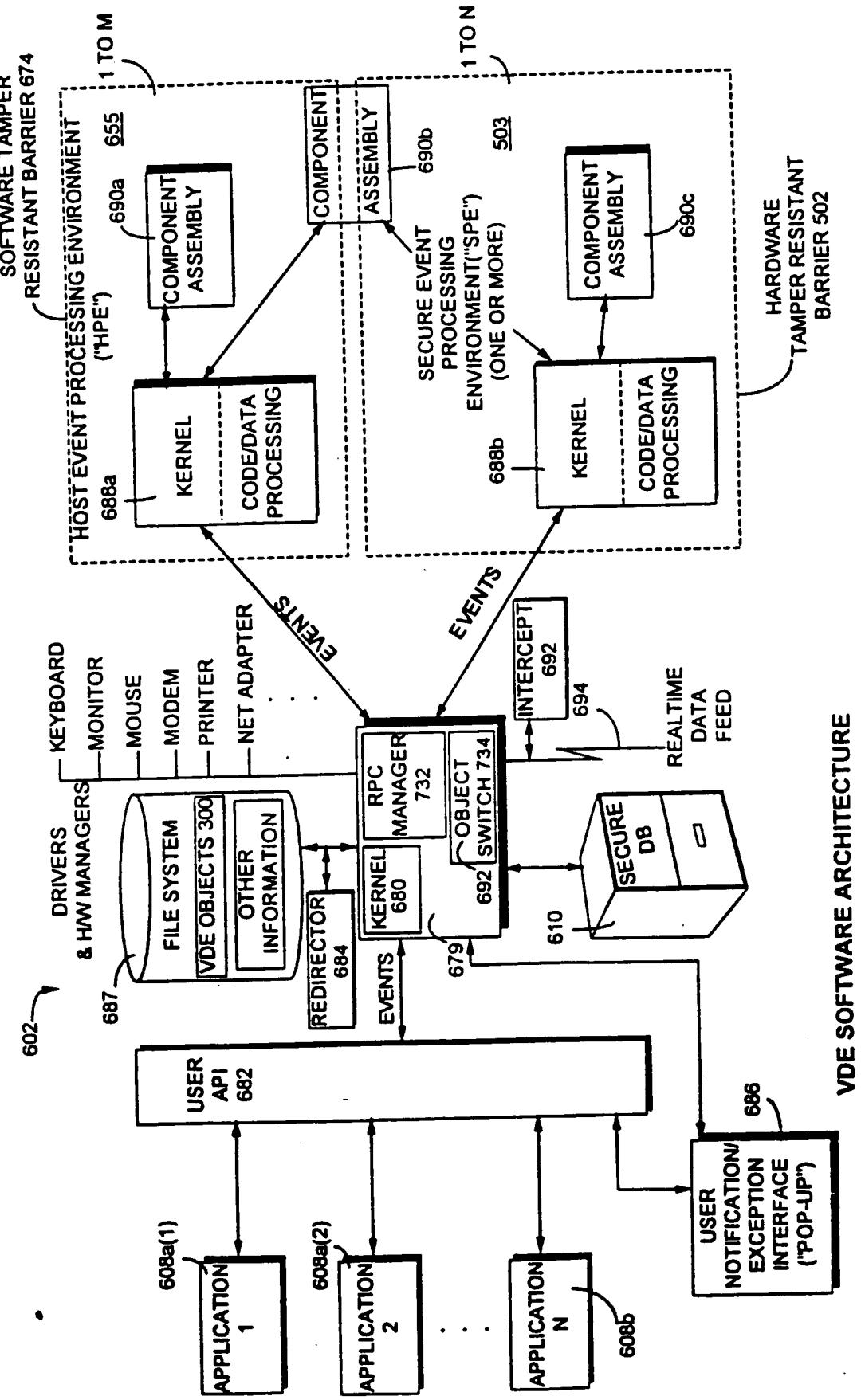


FIG. 11A

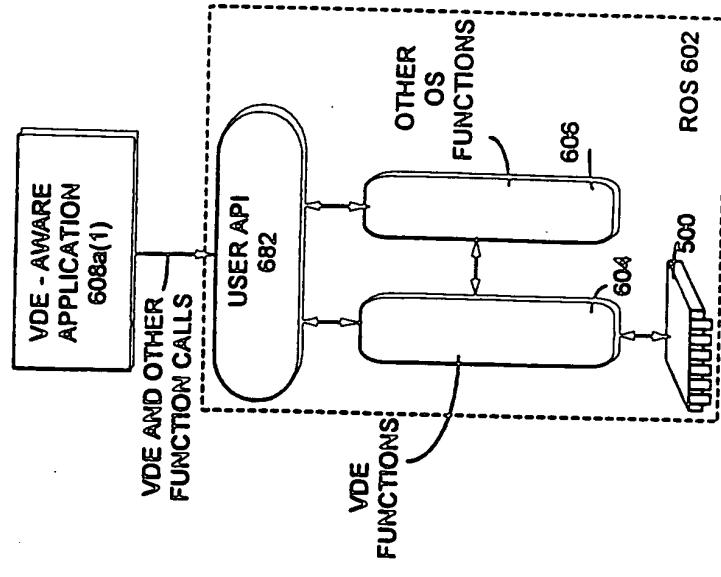


FIG. 11B

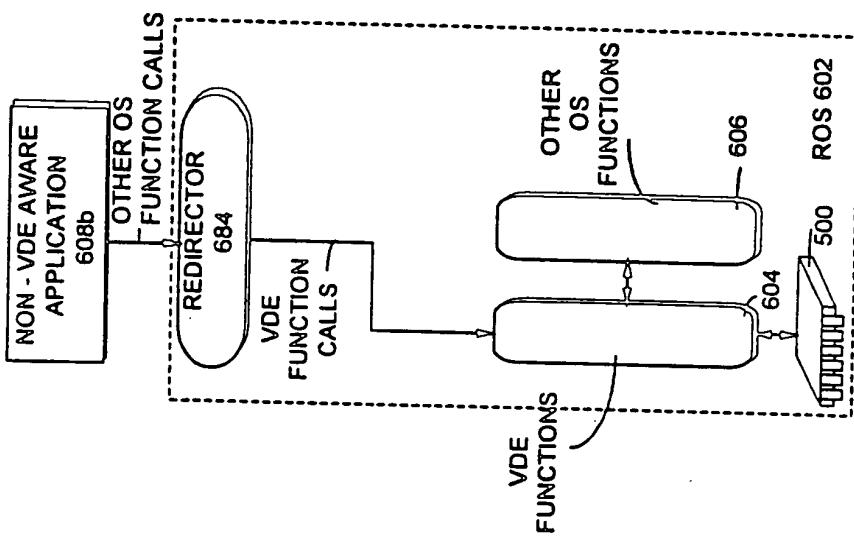
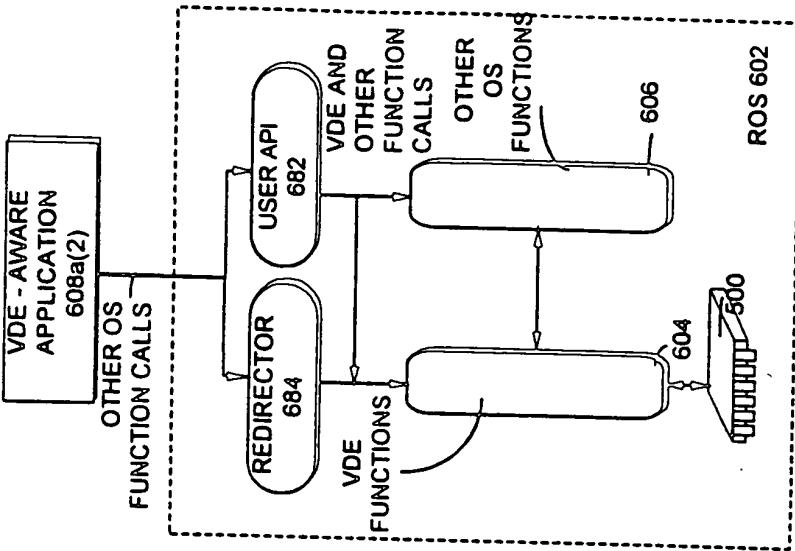


FIG. 11C



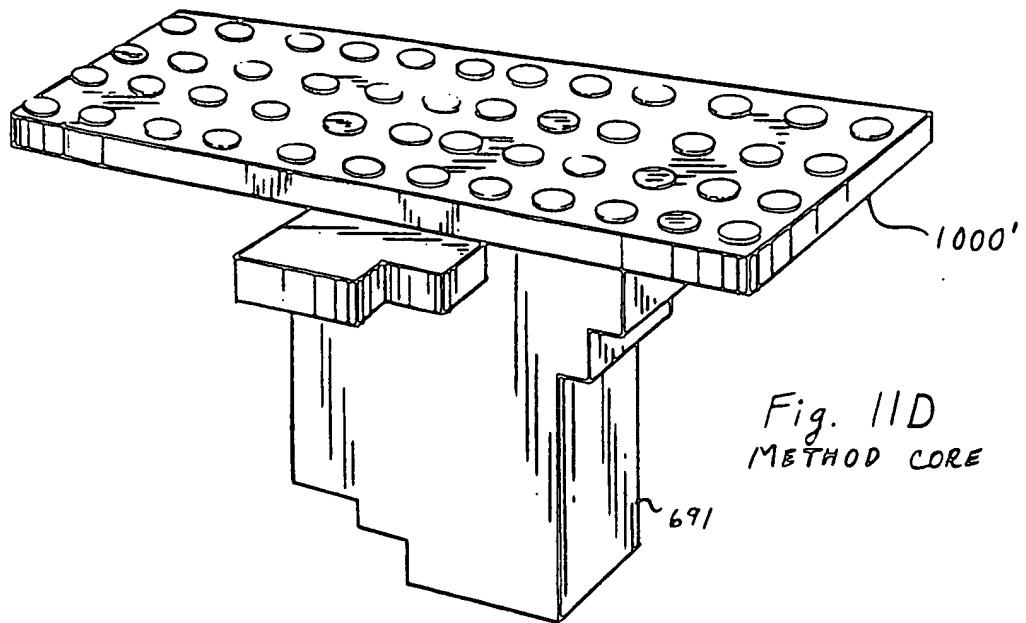


Fig. 11D  
METHOD CORE

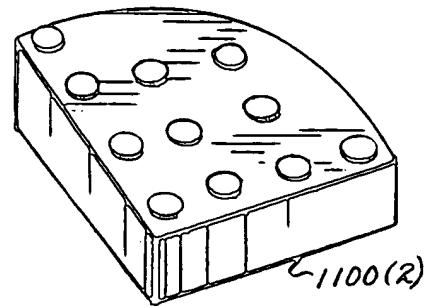
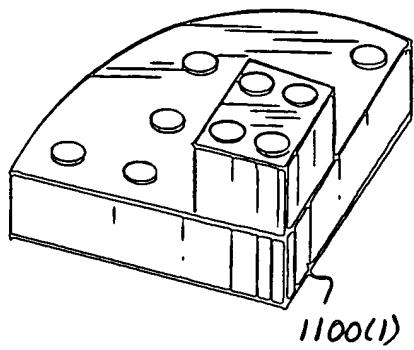


Fig. 11F  
LOAD MODULE

Fig. 11E  
LOAD MODULE  
WITH DTD

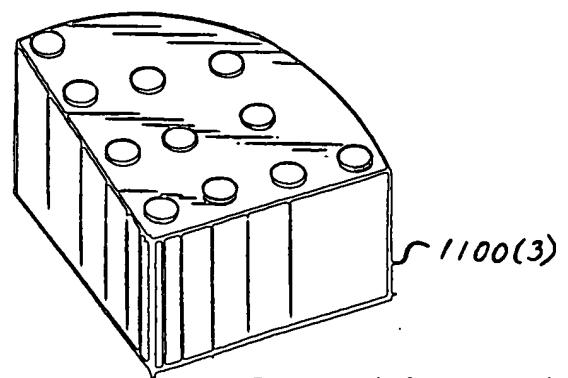


Fig. 11G LOAD MODULE

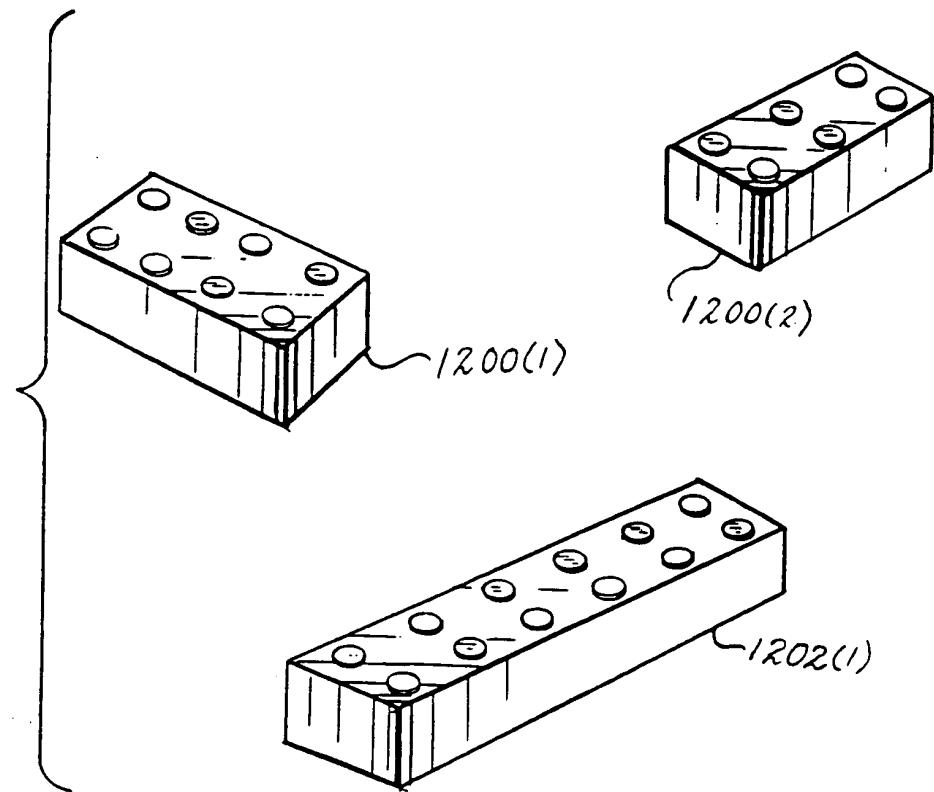
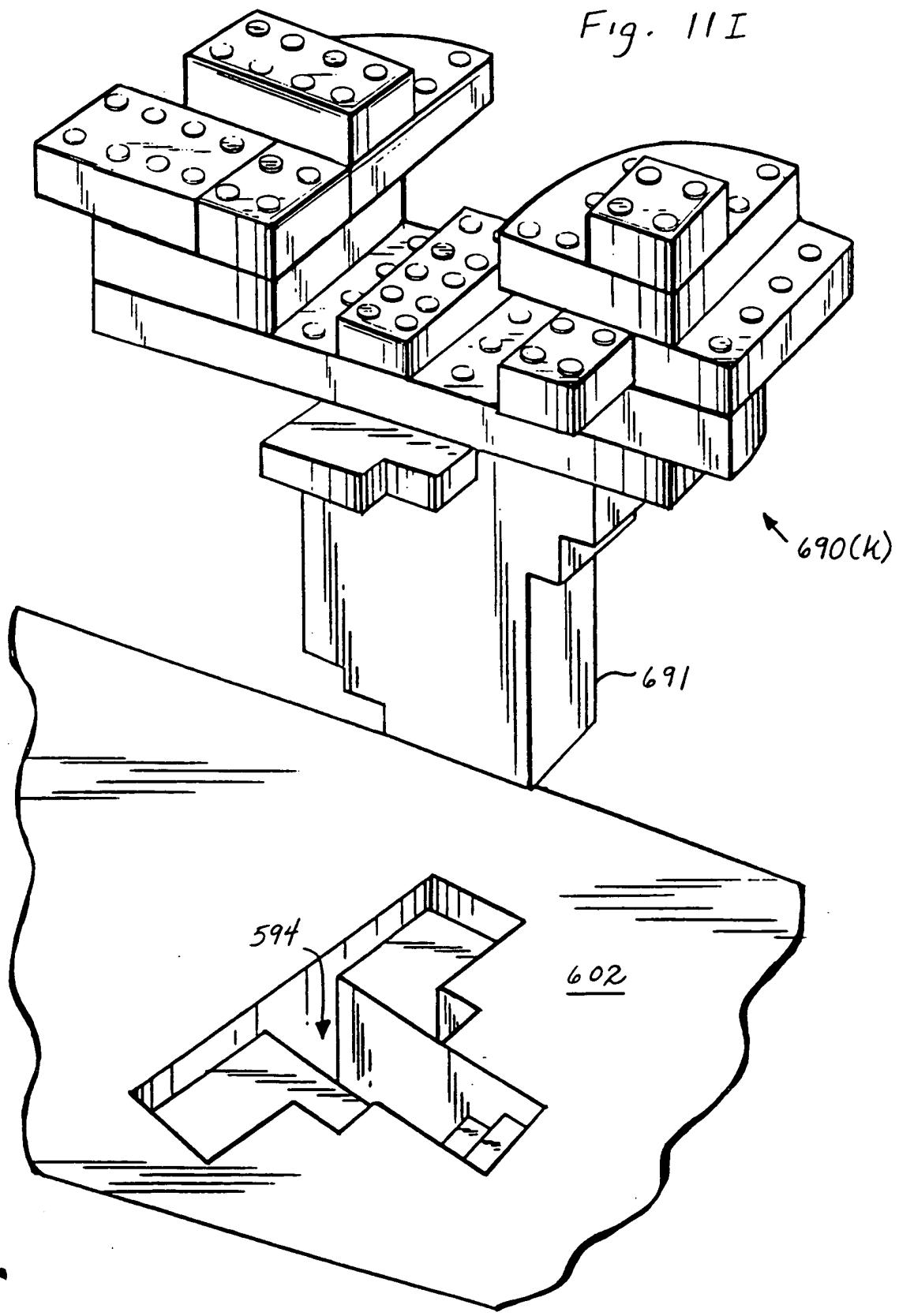


Fig. 114  
DATA STRUCTURES

Fig. III



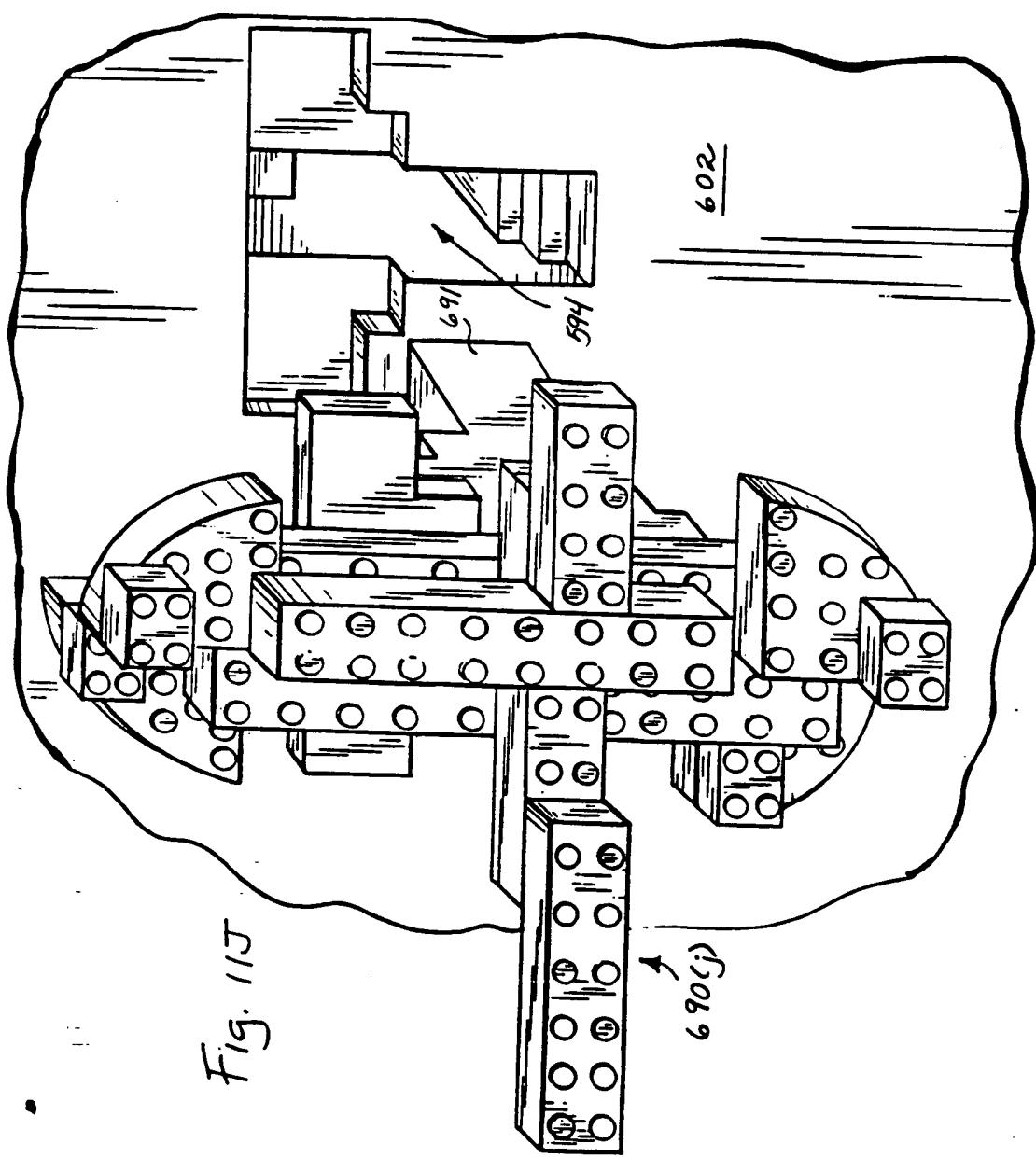
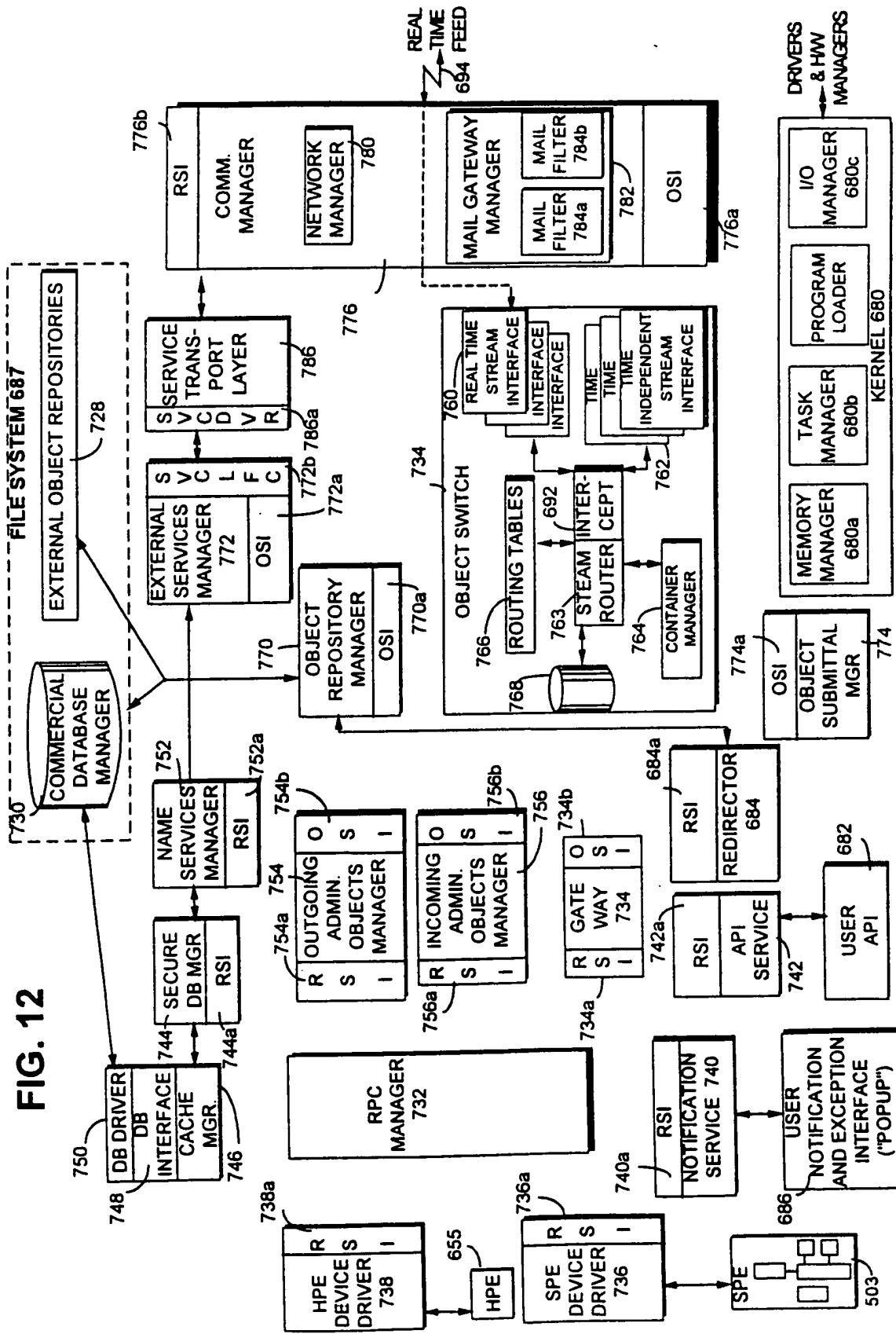


Fig. 11J

**FIG. 12**





**FIG. 12A**  
OBJECT CREATION

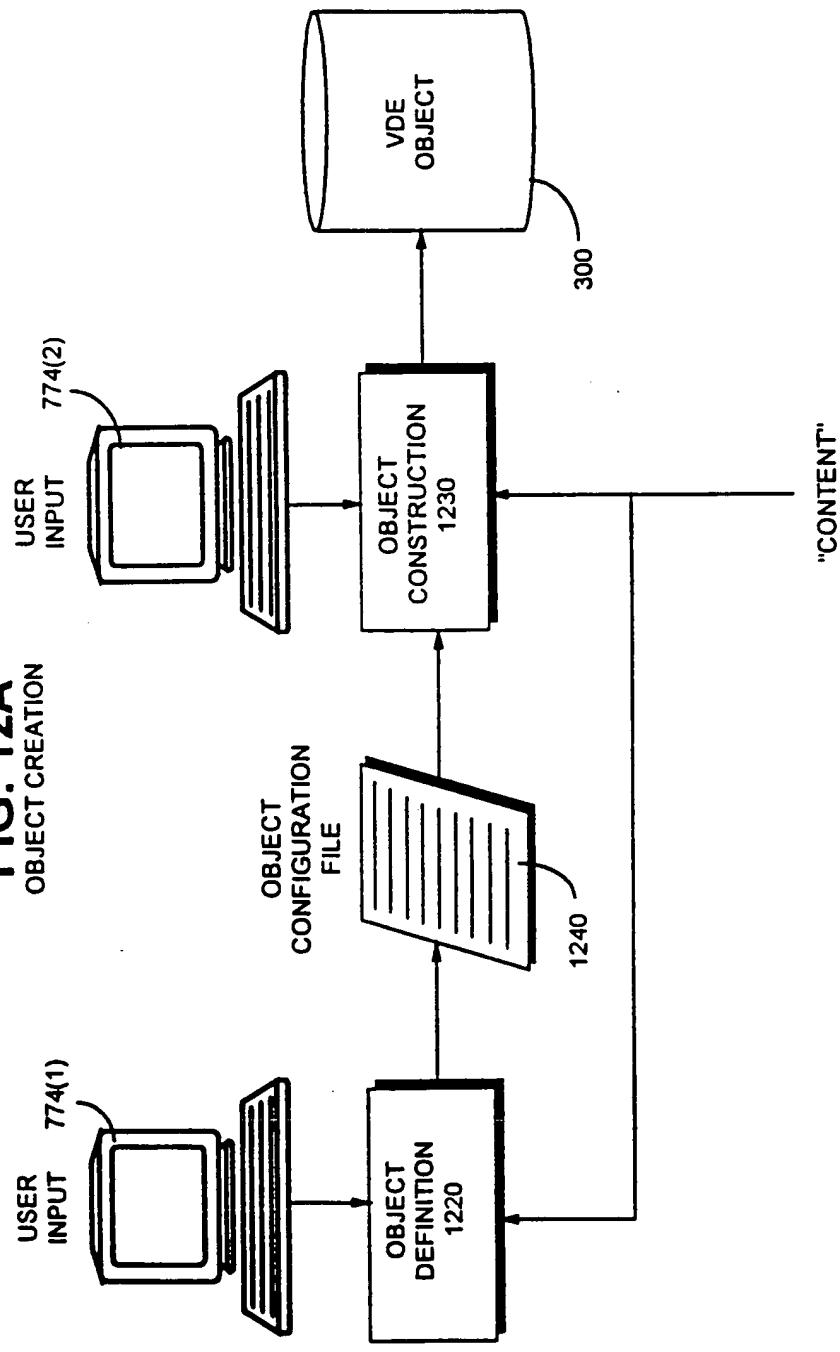
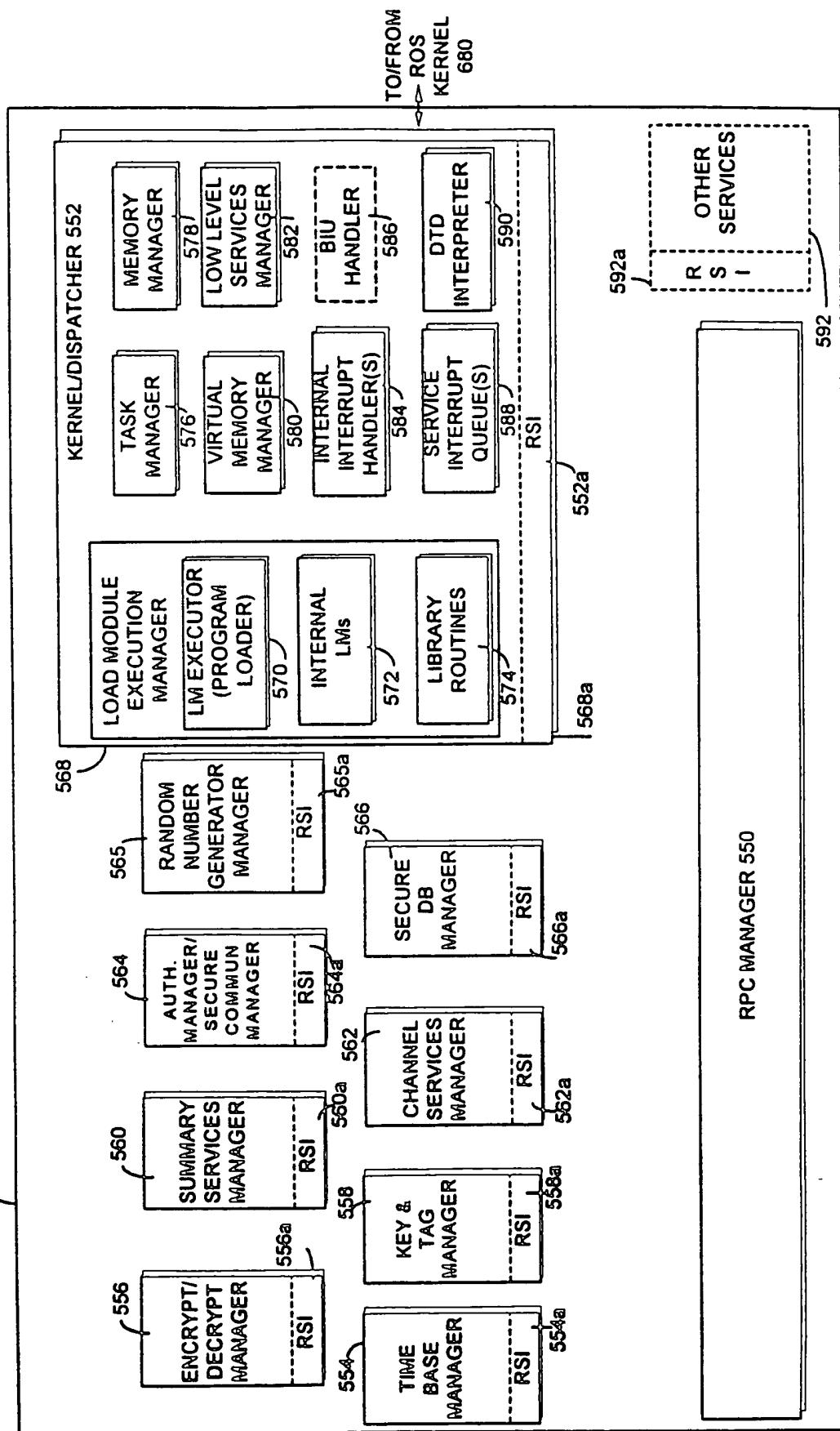


FIG. 13  
PROTECTED PROCESSING ENVIRONMENT 650

503, 655



DEVICE FIRM WIRE LOW LEVEL SERVICES 582	TIME BASE MANAGER 554
INITIALIZATION	ENCRYPTION/DECRYPTION MANAGER 556
POST	PK
DOWNLOAD CHALLENGE/RESPONSE AND AUTHENTICATION	BULK
RECOVERY	KEY AND TAG MANAGER 558
EEPROM/FLASH MEMORY MANAGER	KEY STORAGE IN EEPROM
KERNEL/DISPATCHER 552	KEY LOCATOR
INITIALIZATION	KEY GENERATOR
TASK MANAGER 576 (SLEEP/AWAKE/CONTEXT SWAP)	CONVOLUTION ALGORITHM
INTERRUPT HANDLER 584 (TIMER/BIU/POWER FAIL/WATCHDOG TIMER/ENCRYPTION COMPLETED)	SUMMARY SERVICES MANAGER 560
BIU HANDLER 586	EVENT SUMMARIES
MEMORY MANAGER 578	BUDGET SUMMARIES
INITIALIZATION (SETTING MMU TABLES)	DISTRIBUTER SUMMARY SERVICES
ALLOCATE	CHANNEL SERVICES MANAGER 562
DEALLOCATE	CHANNEL HEADERS
VIRTUAL MEMORY MANAGER 580	CHANNEL DETAILS
SWAP BLOCK PAGING	LOAD MODULE EXECUTION SERVICES 568
EXTERNAL MODULE PAGING	AUTHENTICATION MANAGER/SECURE COMMUNICATION MANAGER 564
MEMORY COMPRESS	DATABASE MANAGER 566
RPC AND TABLES 550	MANAGEMENT FILE SUPPORT
INITIALIZATION	TRANSACTION AND SEQUENCE NUMBER SUPPORT
MESSAGING CODE /SERVICES MANAGER	SRN/ HASH
SEND/RECEIVE	DTD INTERPRETER 590
STATUS	LIBRARY ROUTINES 574
RPC DISPATCH TABLE	I/O CALLS(STRING SEARCH ETC.)
RPC SERVICE TABLE	MISC. ITEMS THAT ARE PROBABLY LIBRARY ROUTINES
•	TAG CHECKING, MD5, CRC'S
	INTERNAL LM'S 572 FOR BASIC METHODS
	METER LOAD MODULE(S)
	BILLING LOAD MODULE(S)
	BUDGET LOAD MODULE(S)
	AUDIT LOAD MODULE(S)
	READ OBJECT LOAD MODULE(S)
	WRITE OBJECT LOAD MODULE(S)
	OPEN OBJECT LOAD MODULE(S)
	CLOSE OBJECT LOAD MODULE(S)
	•
	SPU ROM/EEPROM/FLASH 532

FIG. 14A

FIG. 14B

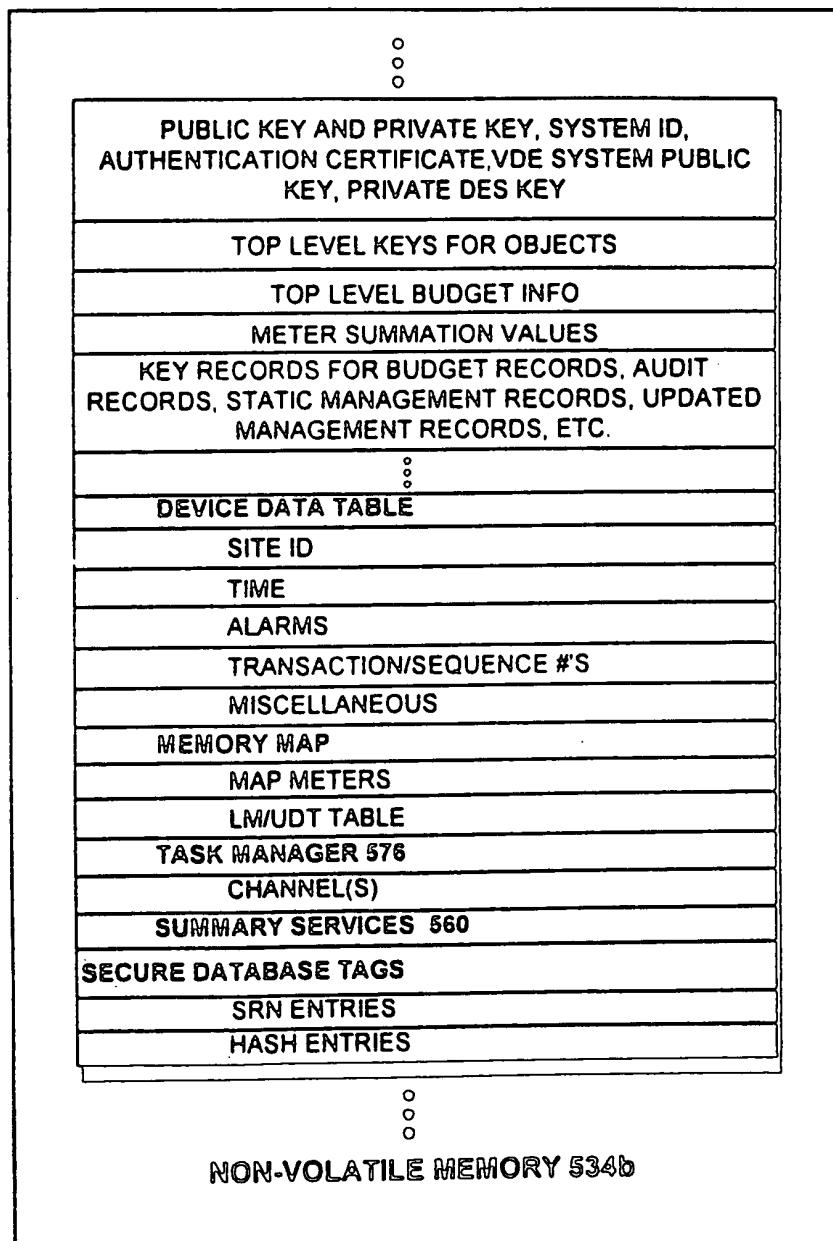
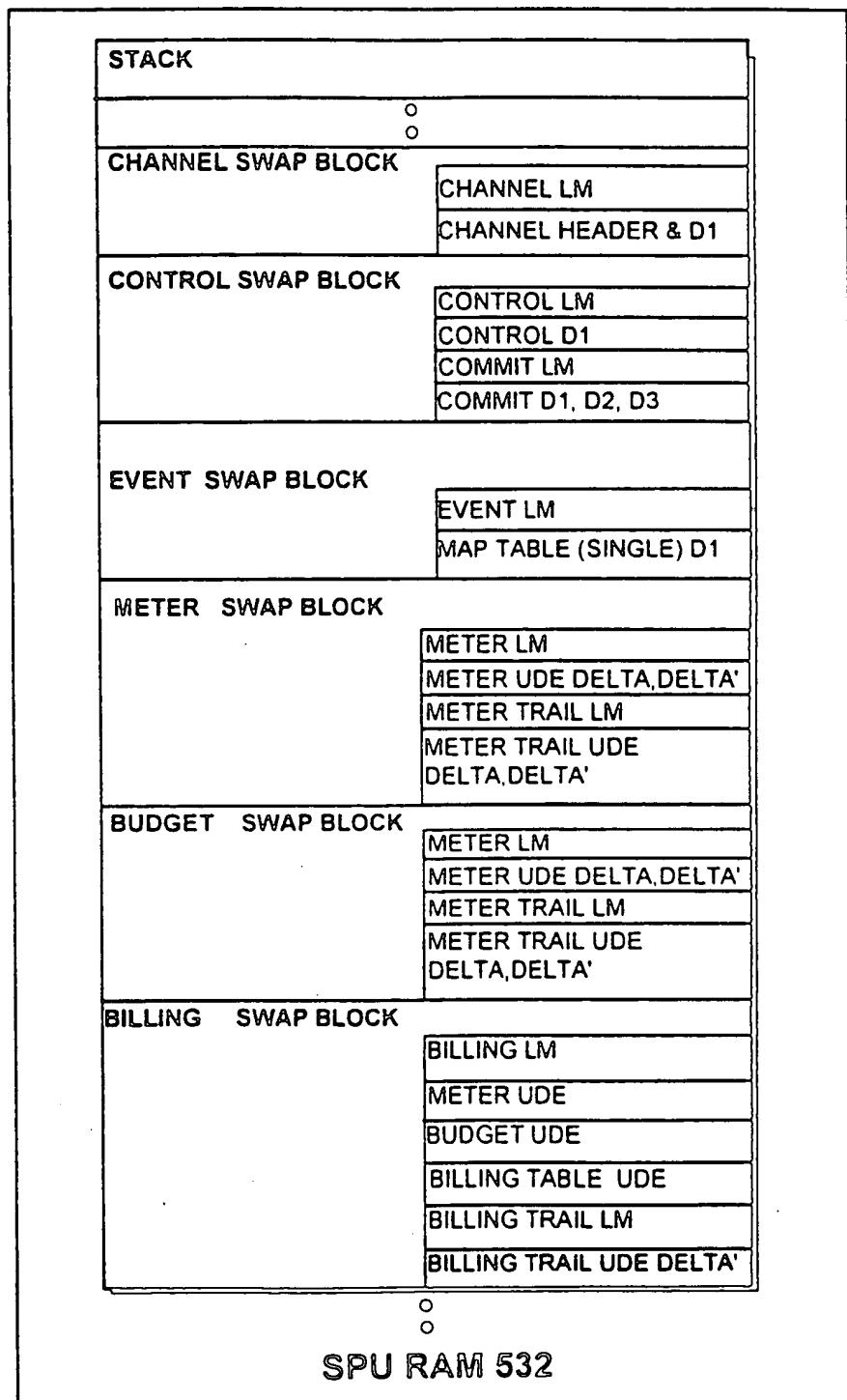


FIG. 14C



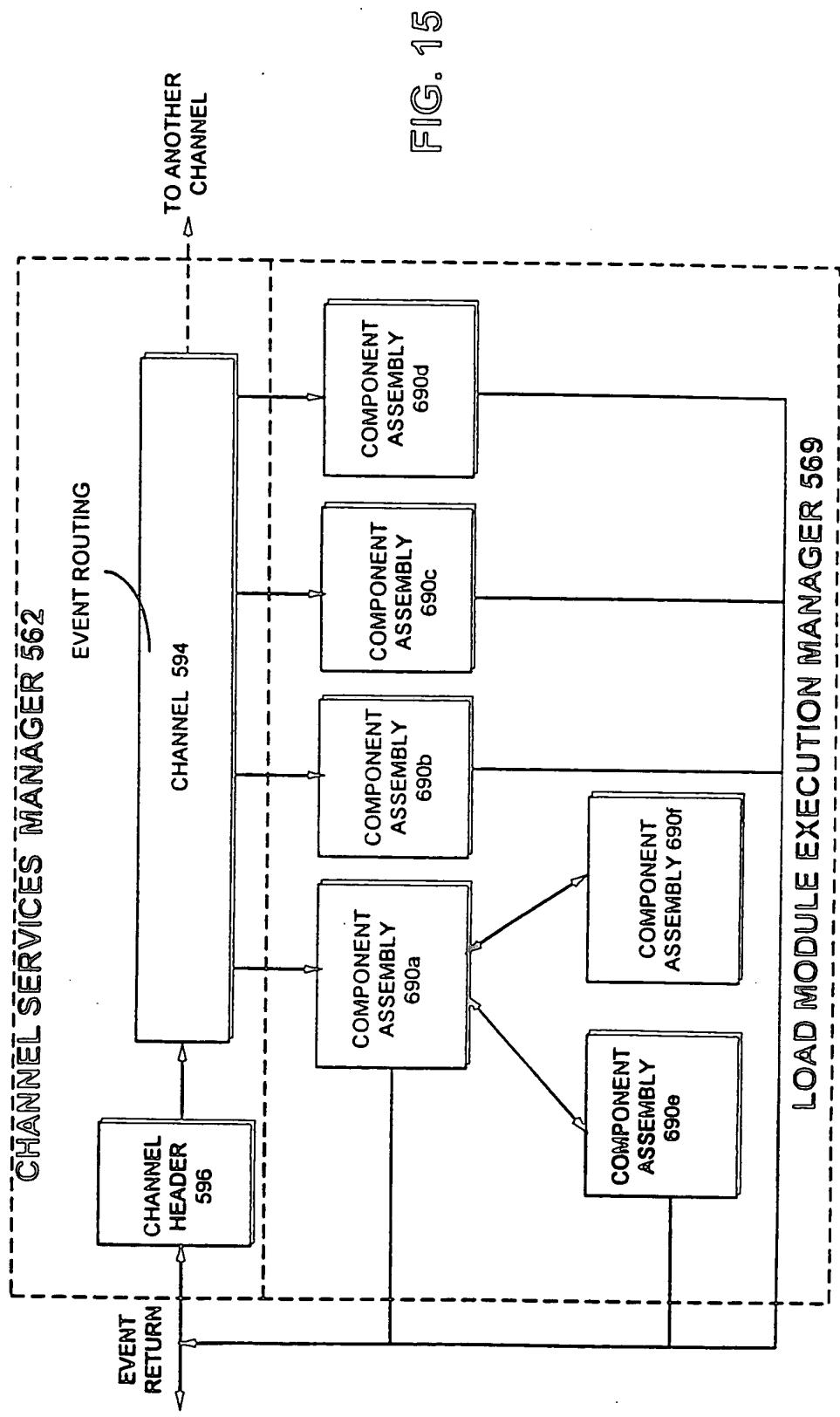
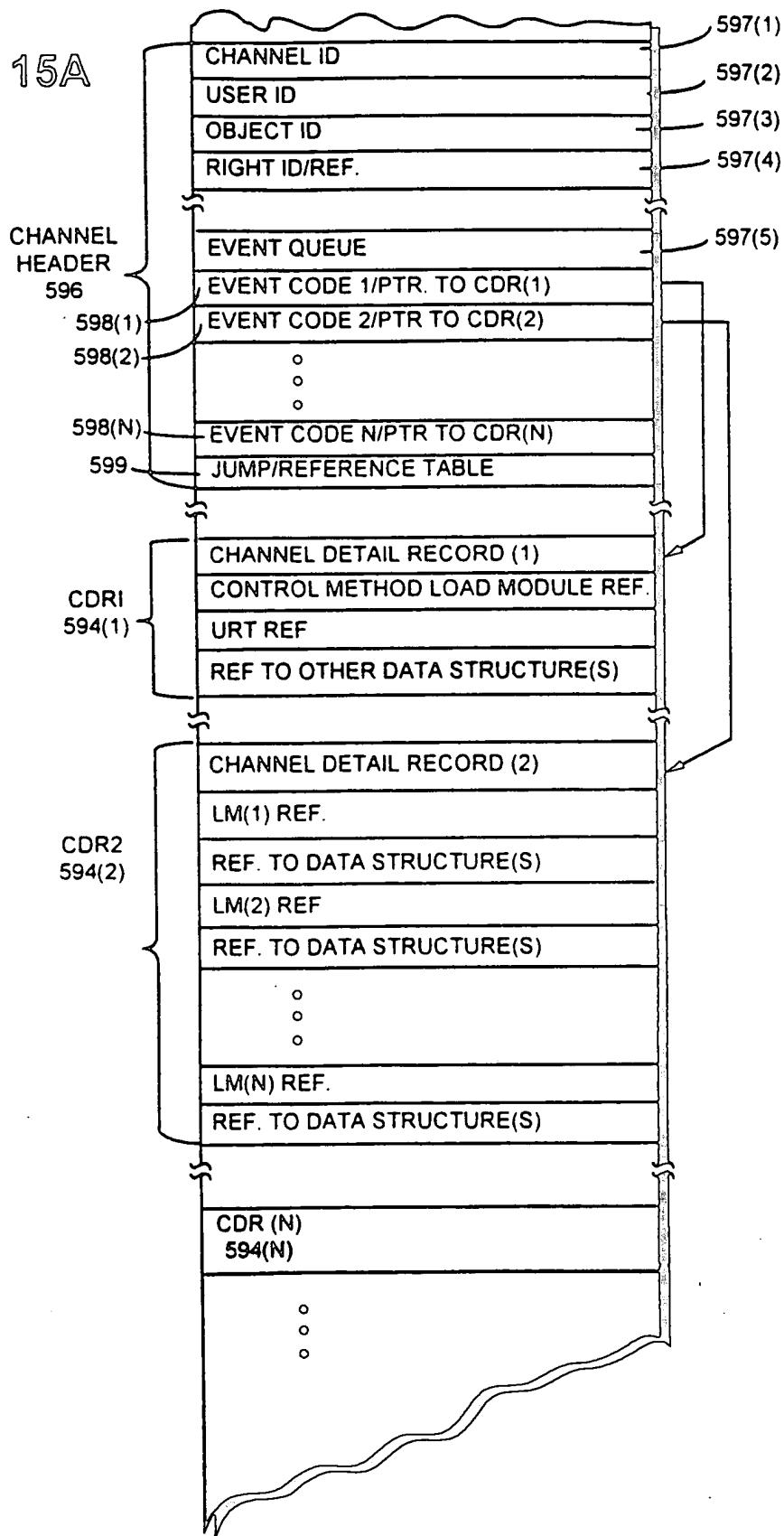


FIG. 15A



**FIG. 15B**

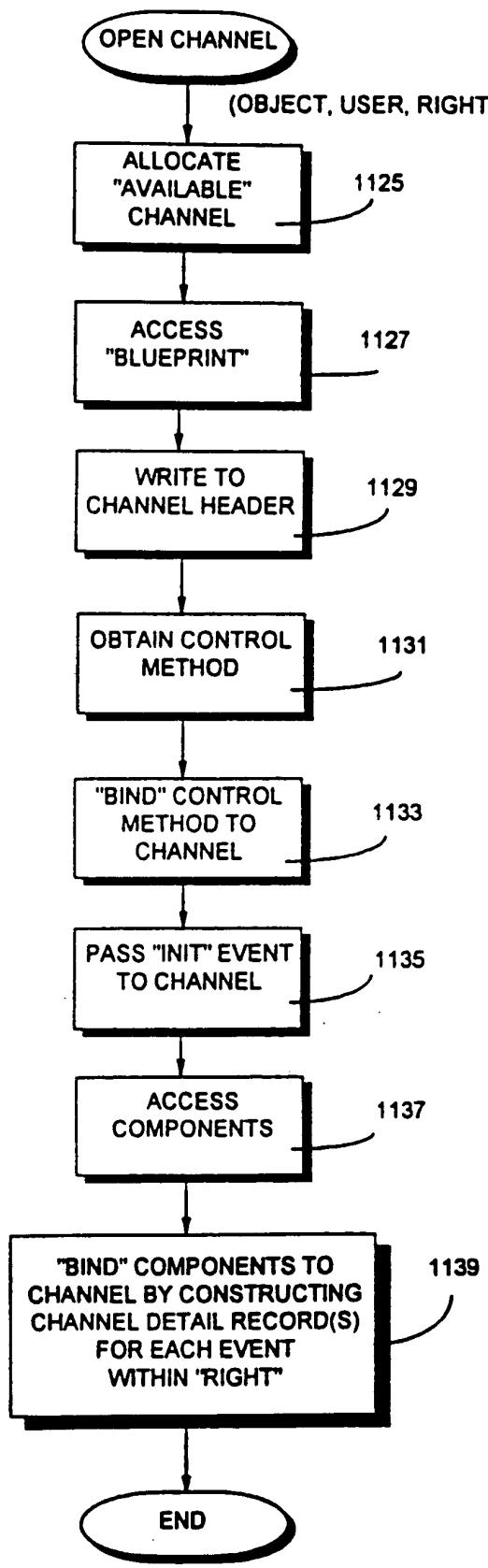
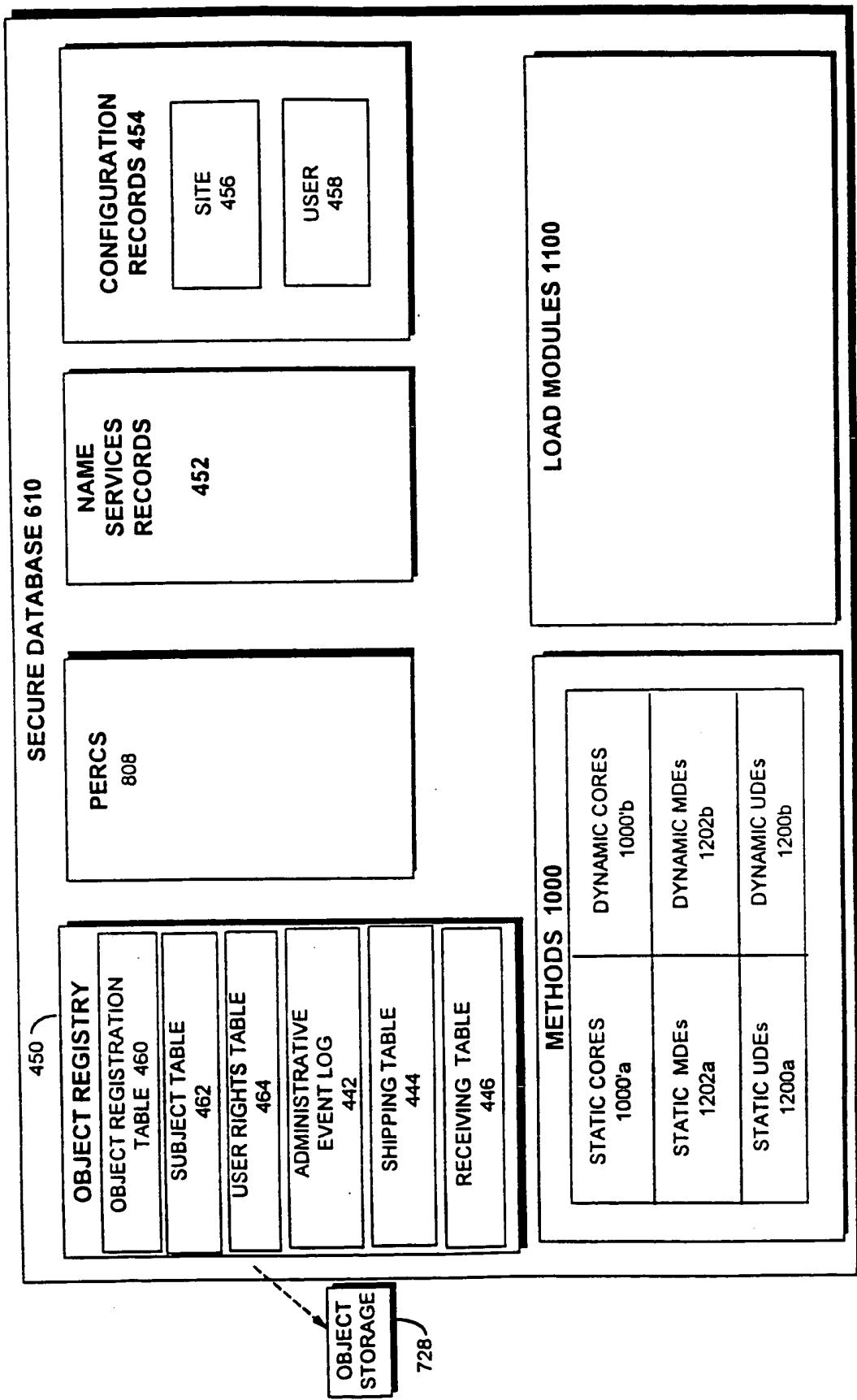


FIG. 16



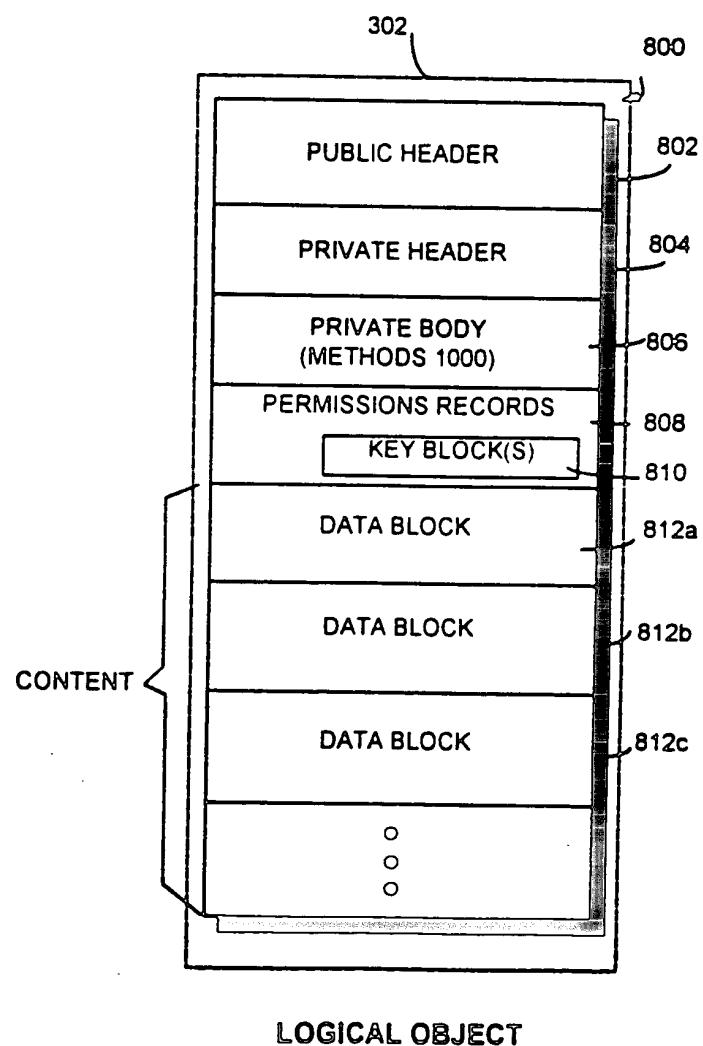
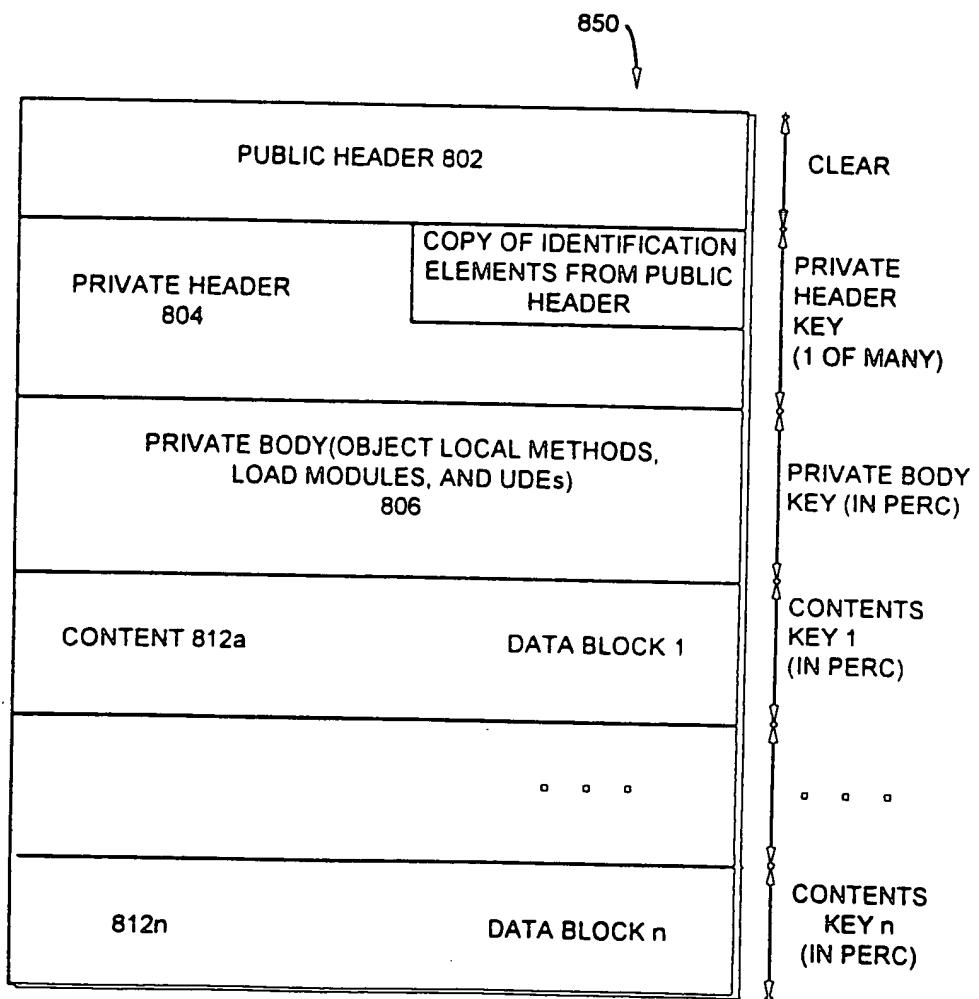
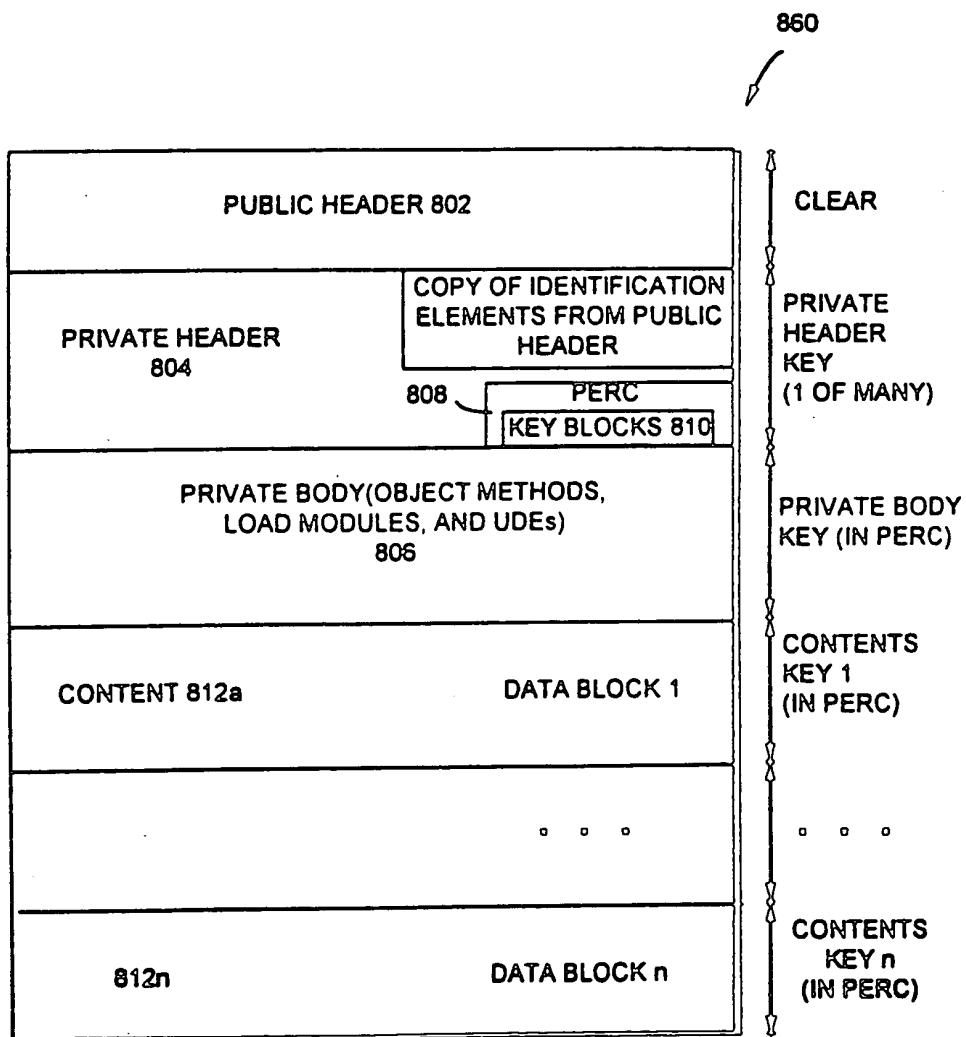


FIG. 17



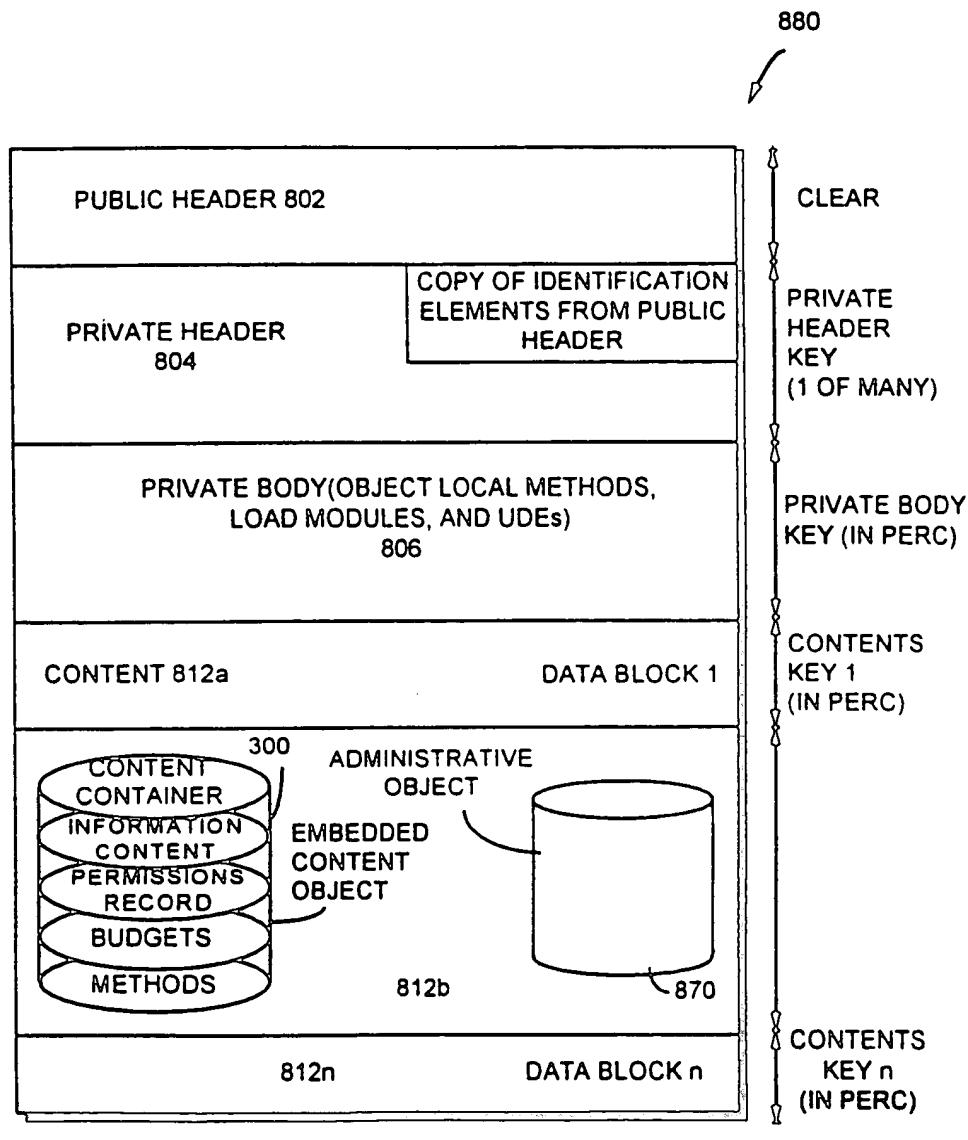
STATIONARY OBJECT

FIG. 18



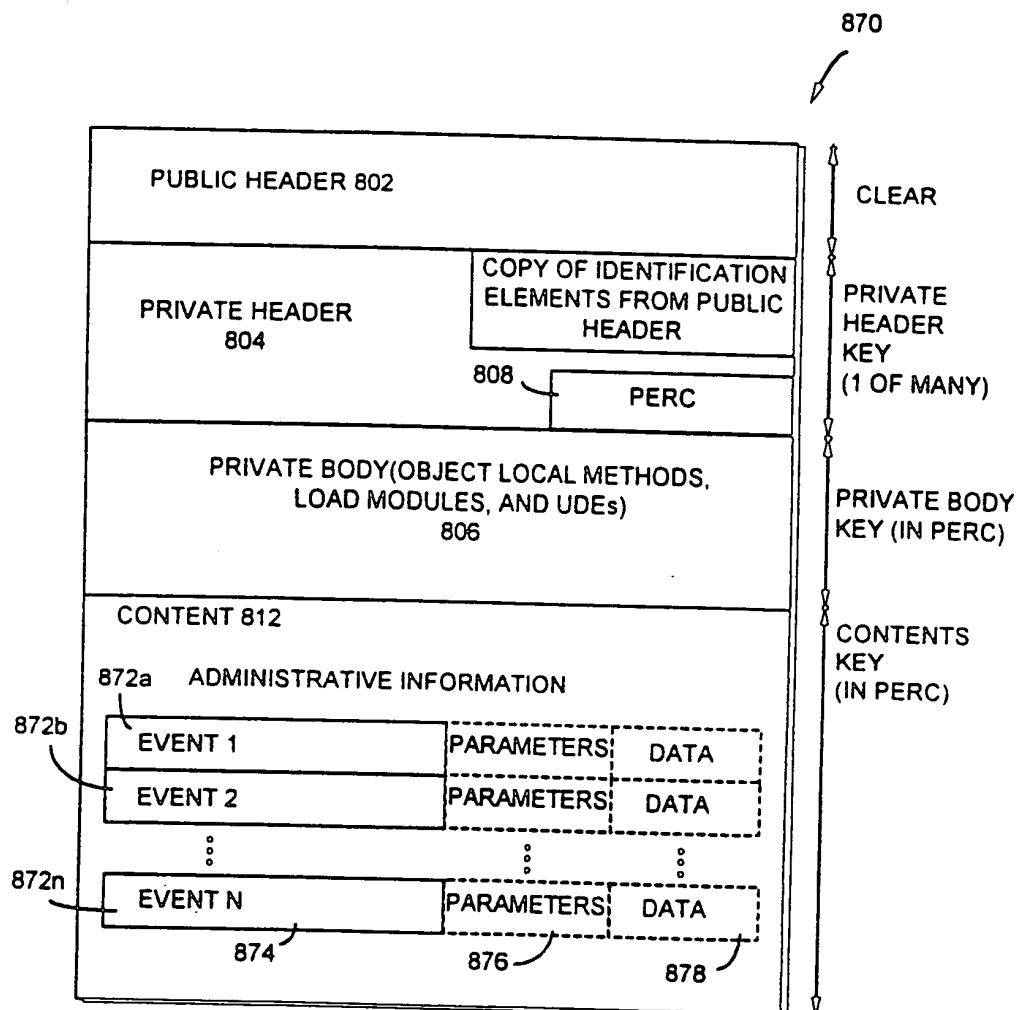
TRAVELING OBJECT

FIG. 19



**CONTENT OBJECT**

**FIG. 20**



**ADMINISTRATIVE OBJECT**

**FIG. 21**

**FIG. 22**

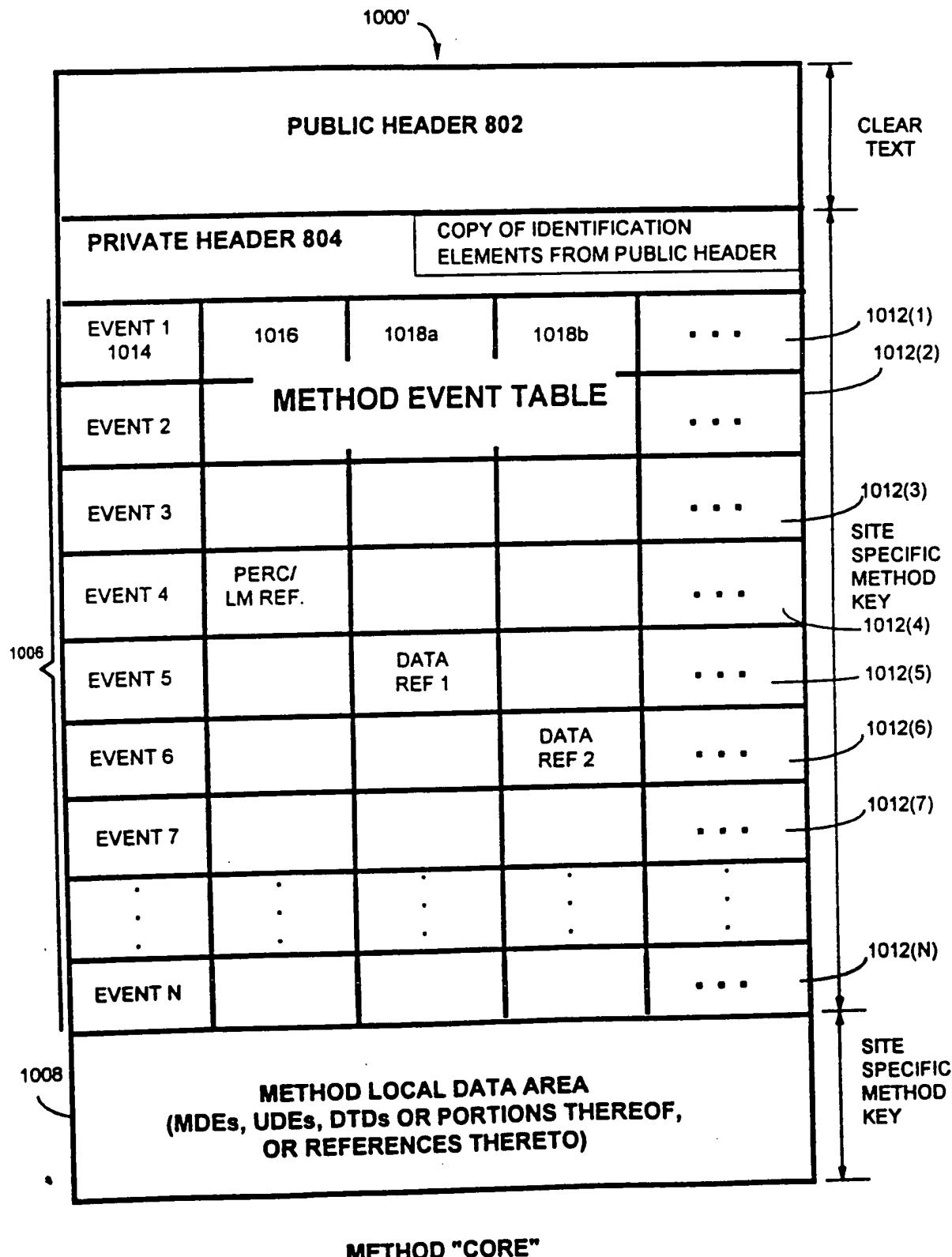
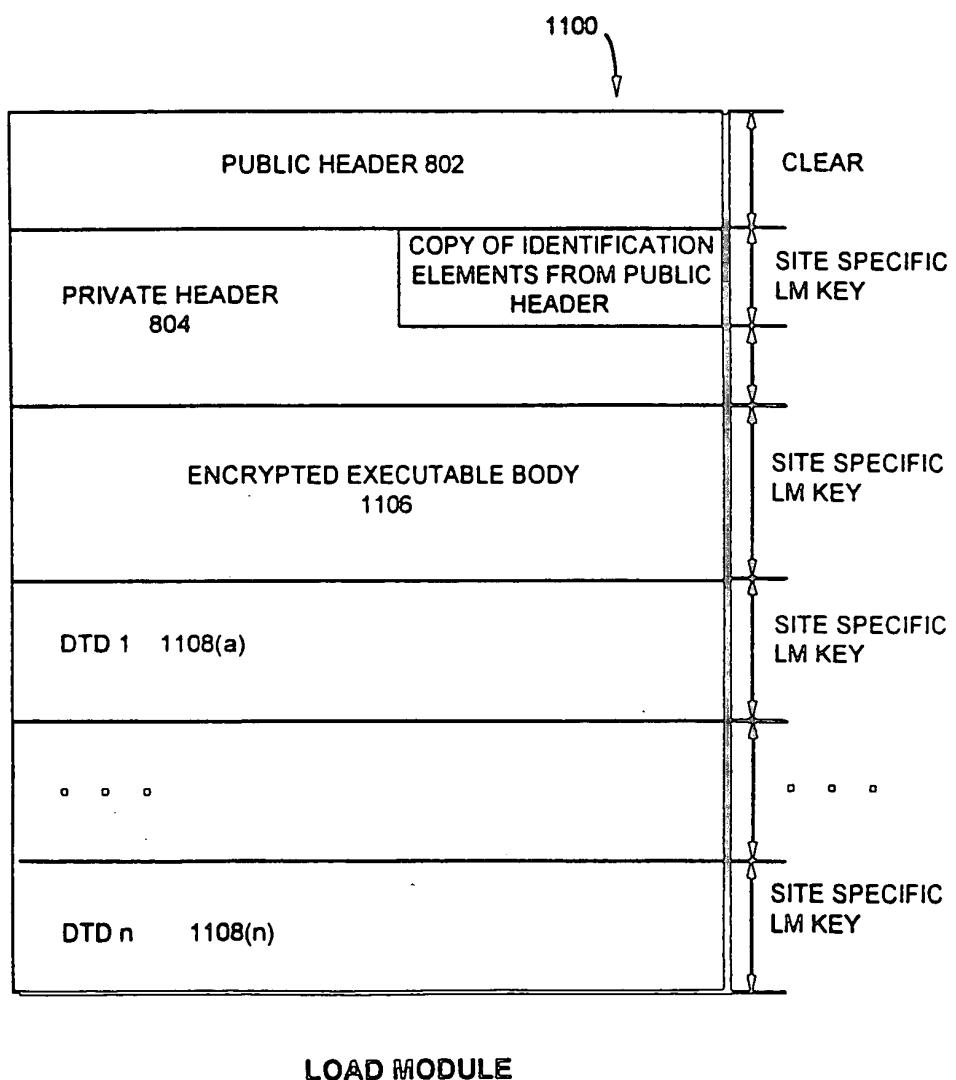


FIG. 23



**FIG. 24**

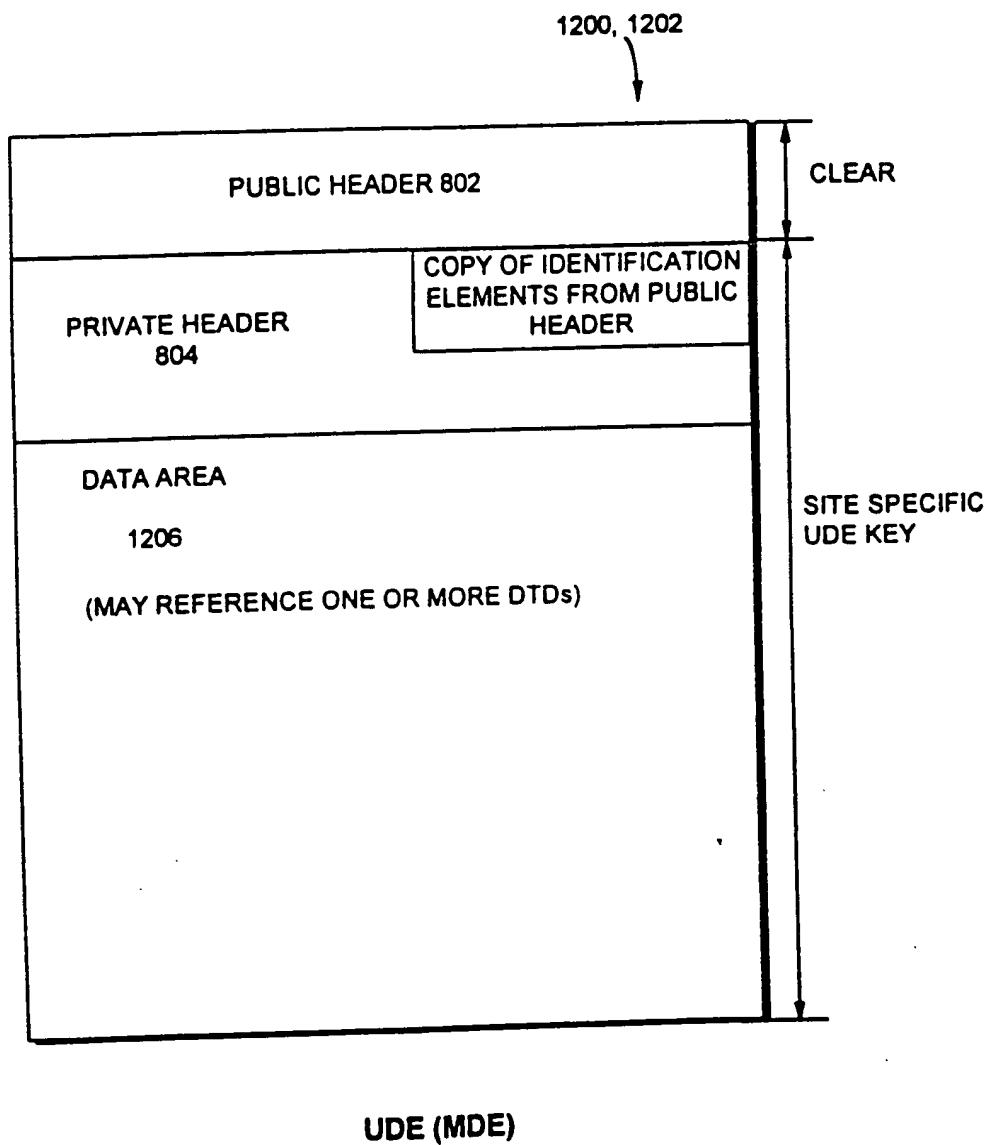


FIG. 25A

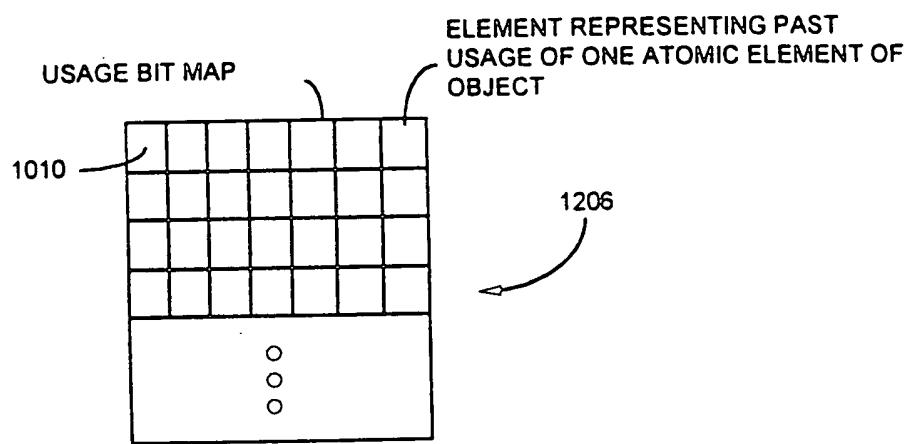
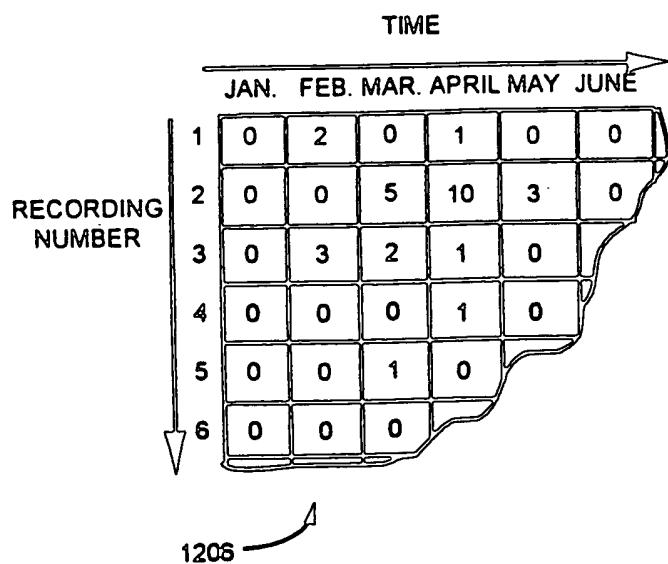
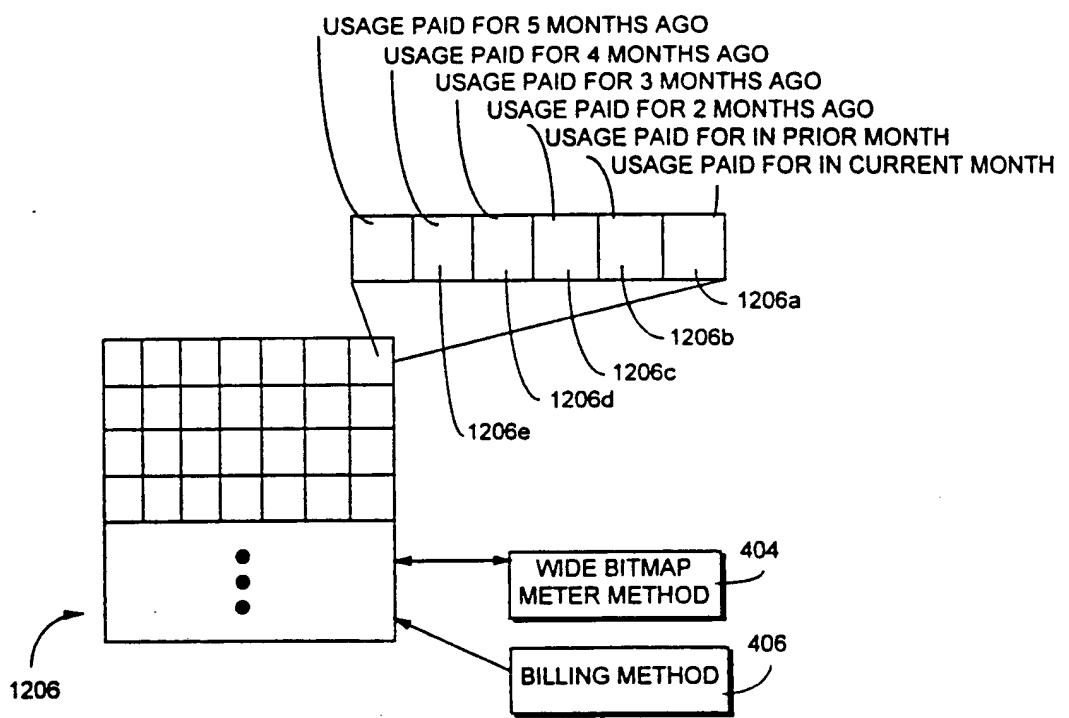


FIG. 25B



**FIG. 25C**



**FIG. 25C**

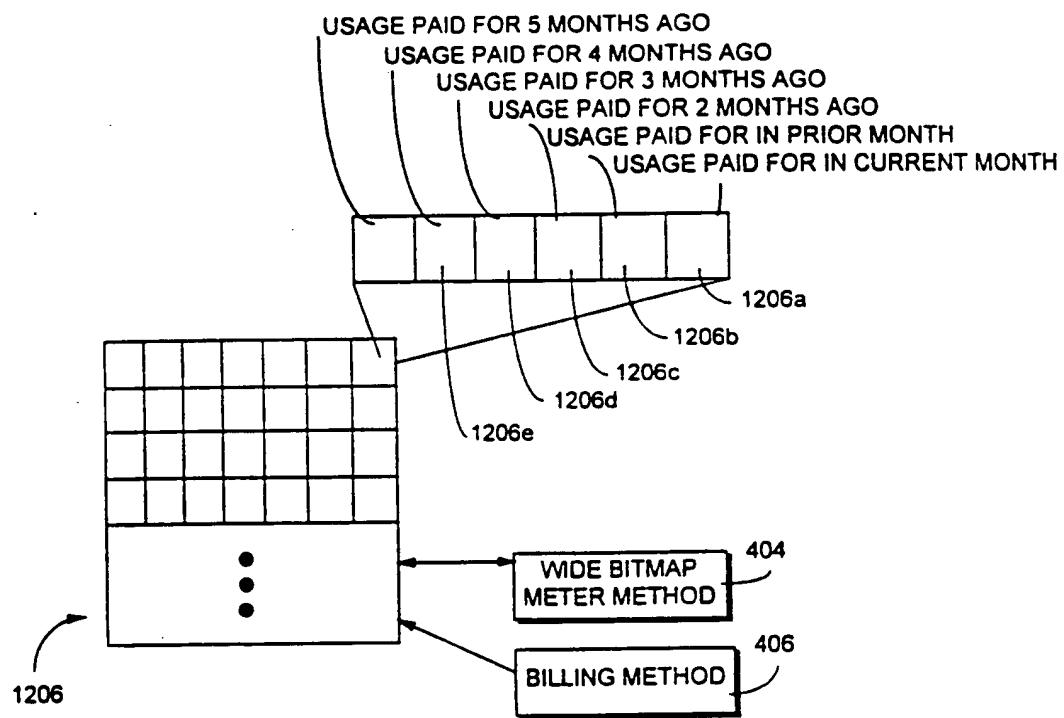


FIG. 26

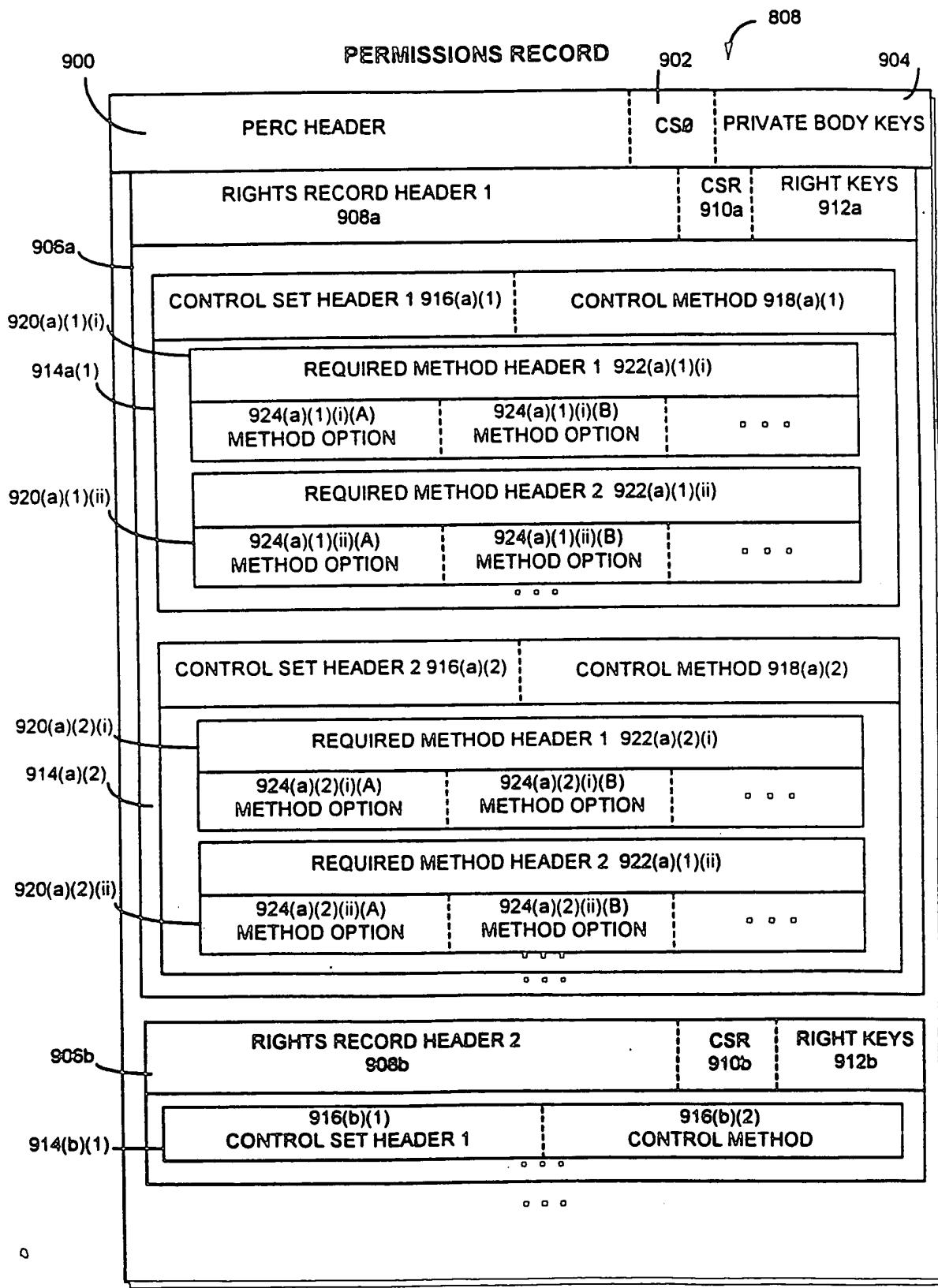
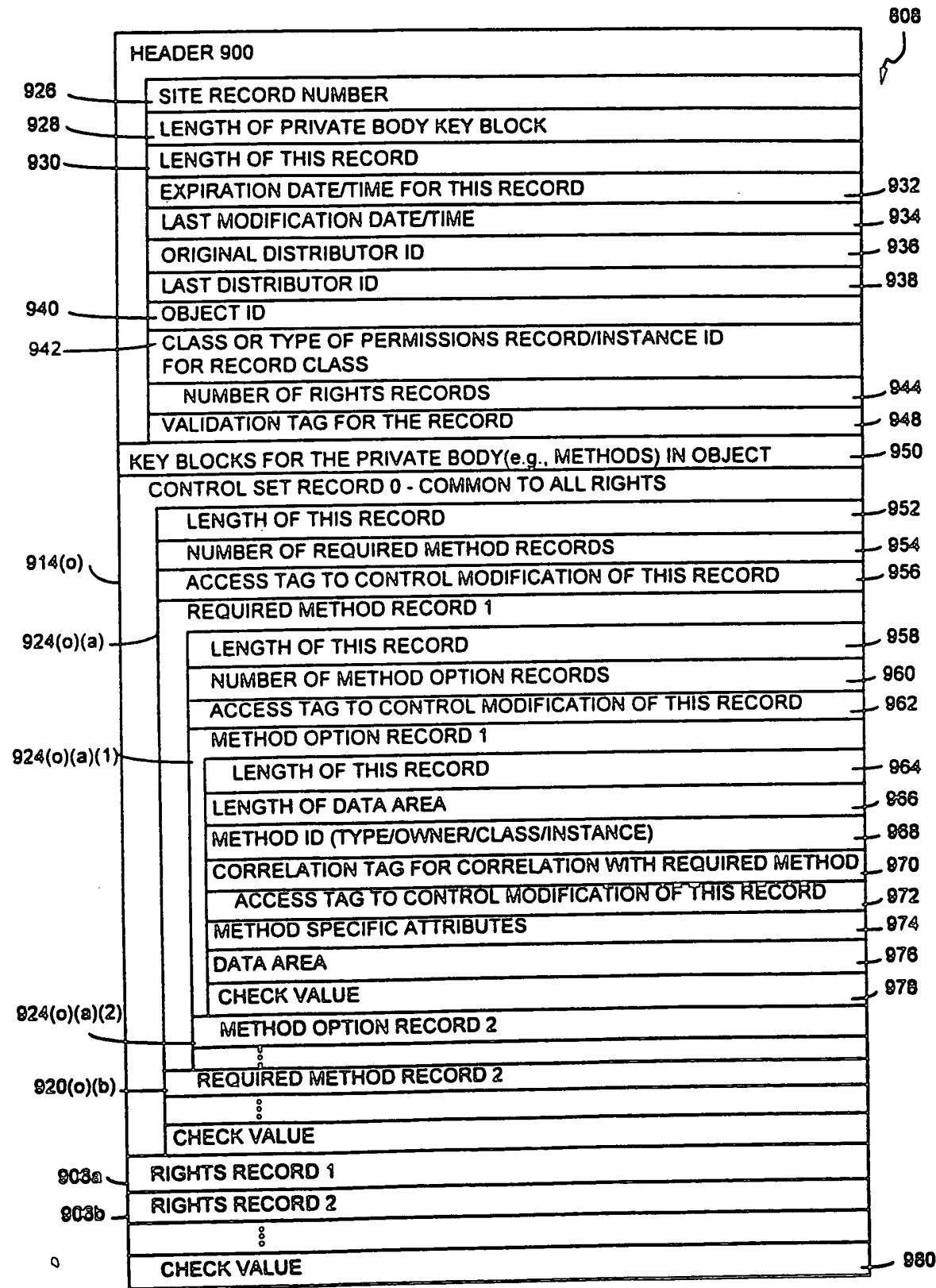


FIG. 26A



PERC

**FIG. 26B**

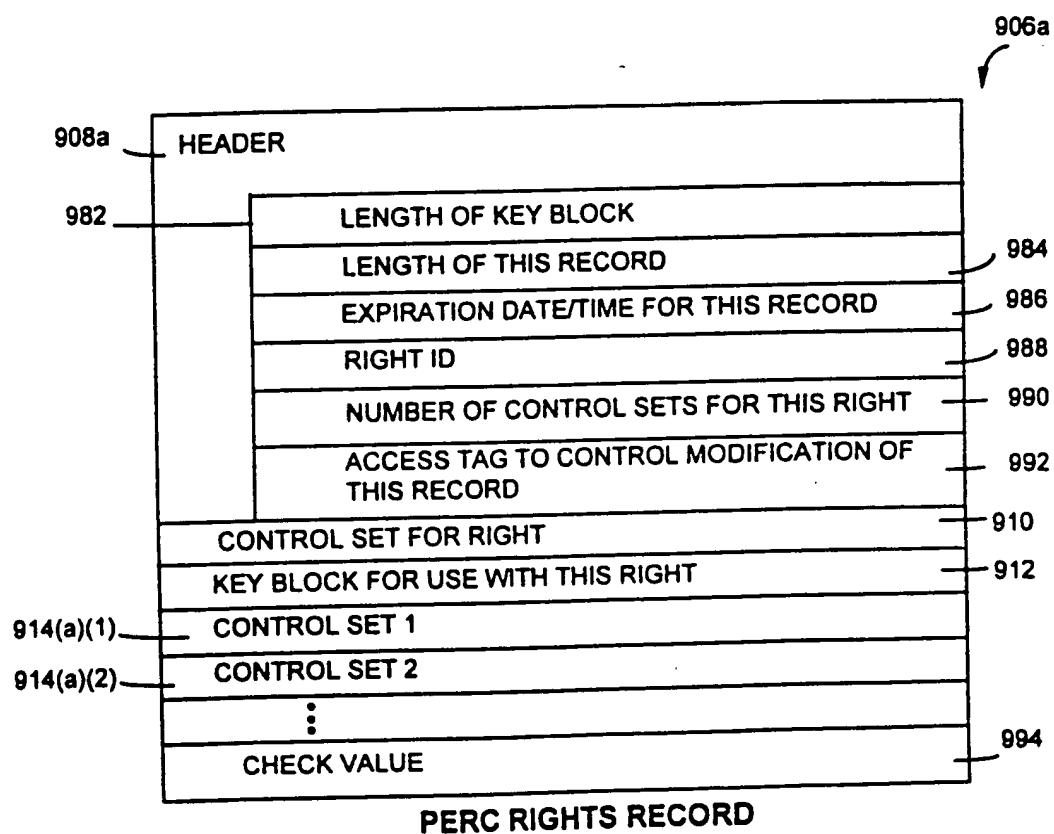


FIG. 27  
SHIPPING TABLE

HEADER 444A	SITE RECORD NUMBER	444A(1)
	USER (GROUP) ID	444A(2)
	REF. TO "FIRST" COMPLETED OUTGOING SHIPPING RECORD	444A(3)
	REF. TO "LAST" COMPLETED OUTGOING SHIPPING RECORD	444A(4)
	REF. TO "FIRST" SCHEDULED OUTGOING SHIPPING RECORD	444A(5)
	REF. TO "LAST" SCHEDULED OUTGOING SHIPPING RECORD	444A(6)
	VALIDATION TAG FROM NAME SERVICES RECORD	444A(7)
	VALIDATION TAG FOR "FIRST" OUTGOING SHIPPING RECORD(S)	444A(8)
	CHECK VALUE	444A(9)
SHIPPING RECORD 445(1)	SITE RECORD NUMBER	445(1)(A)
	FIRST DATE/TIME FOR SCHEDULED SHIPMENT	445(1)(B)
	LAST DATE/TIME FOR SCHEDULED SHIPMENT	445(1)(C)
	ACTUAL DATE/TIME OF COMPLETED SHIPMENT	445(1)(D)
	OBJECT ID OF ADMINISTRATIVE OBJECT (TO BE) SHIPPED	445(1)(E)
	REF. TO ENTRY IN ADMINISTRATIVE EVENT LOG	445(1)(F)
	REF. TO NAME SERVICES RECORD NAMING RECIPIENT	445(1)(G)
	PURPOSE OF SHIPMENT	445(1)(H)
	STATUS OF SHIPMENT	445(1)(I)
	REF. TO "PREVIOUS" OUTGOING SHIPPING RECORD	445(1)(J)
	REF. TO "NEXT" OUTGOING SHIPPING RECORD	445(1)(K)
	VALIDATION TAG FROM HEADER	445(1)(L)
	VALIDATION TAG TO ADMINISTRATIVE EVENT LOG	445(1)(M)
	VALIDATION TAG TO NAME SERVICES RECORD	445(1)(N)
	VALIDATION TAG FROM PREVIOUS RECORD	445(1)(O)
	VALIDATION TAG TO NEXT RECORD	445(1)(P)
	CHECK VALUE	445(1)(Q)
	:	
	SHIPPING RECORD N	445(1)(R)

FIG. 28  
RECEIVING TABLE

	446A(1)
HEADER 446A	<p>SITE RECORD NUMBER</p> <p>USER (GROUP) ID</p> <p>REF. TO "FIRST" COMPLETED INCOMING RECEIVING RECORD</p> <p>REF. TO "LAST" COMPLETED INCOMING RECEIVING RECORD</p> <p>REF. TO "FIRST" SCHEDULED INCOMING RECEIVING RECORD</p> <p>REF. TO "LAST" SCHEDULED INCOMING RECEIVING RECORD</p> <p>VALIDATION TAG FROM NAME SERVICES RECORD</p> <p>VALIDATION TAG FOR "FIRST" INCOMING RECEIVING RECORD(S)</p> <p>CHECK VALUE</p>
RECEIVING RECORD 447(1)	<p>SITE RECORD NUMBER</p> <p>FIRST DATE/TIME FOR SCHEDULED RECEPTION</p> <p>LAST DATE/TIME FOR SCHEDULED RECEPTION</p> <p>ACTUAL DATE/TIME OF COMPLETED RECEPTION</p> <p>OBJECT ID OF ADMINISTRATIVE OBJECT (TO BE) RECEIVED</p> <p>REF. TO ENTRY IN ADMINISTRATIVE EVENT LOG</p> <p>REF. TO NAME SERVICES RECORD NAMING SENDER</p> <p>PURPOSE OF RECEPTION</p> <p>STATUS OF RECEPTION</p> <p>REF. TO "PREVIOUS" INCOMING RECEIVING RECORD</p> <p>REF. TO "NEXT" INCOMING RECEIVING RECORD</p> <p>VALIDATION TAGS</p> <p>CHECK VALUE</p> <p>• • •</p> <p>RECEIVING RECORD N</p>
	<p>446</p> <p>446A(2)</p> <p>446A(3)</p> <p>446A(4)</p> <p>446A(5)</p> <p>446A(6)</p> <p>446A(7)</p> <p>446A(8)</p> <p>446A(9)</p> <p>447(1)(A)</p> <p>447(1)(B)</p> <p>447(1)(C)</p> <p>447(1)(D)</p> <p>447(1)(E)</p> <p>447(1)(F)</p> <p>447(1)(G)</p> <p>447(1)(H)</p> <p>447(1)(I)</p> <p>447(1)(J)</p> <p>447(1)(K)</p> <p>447(1)(L)</p> <p>447(1)(M)</p> <p>447(2)</p>

FIG. 29  
ADMINISTRATIVE EVENT LOG

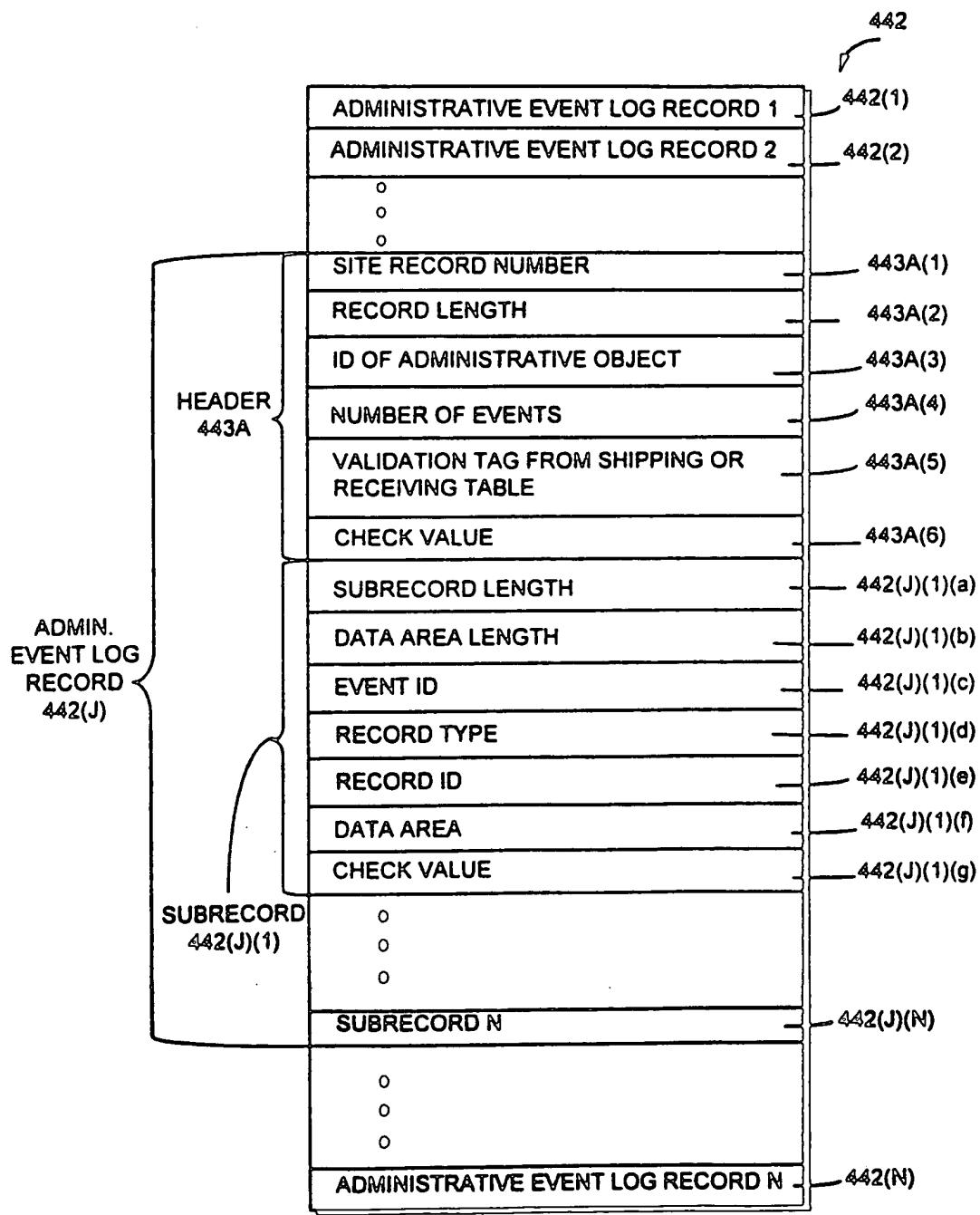
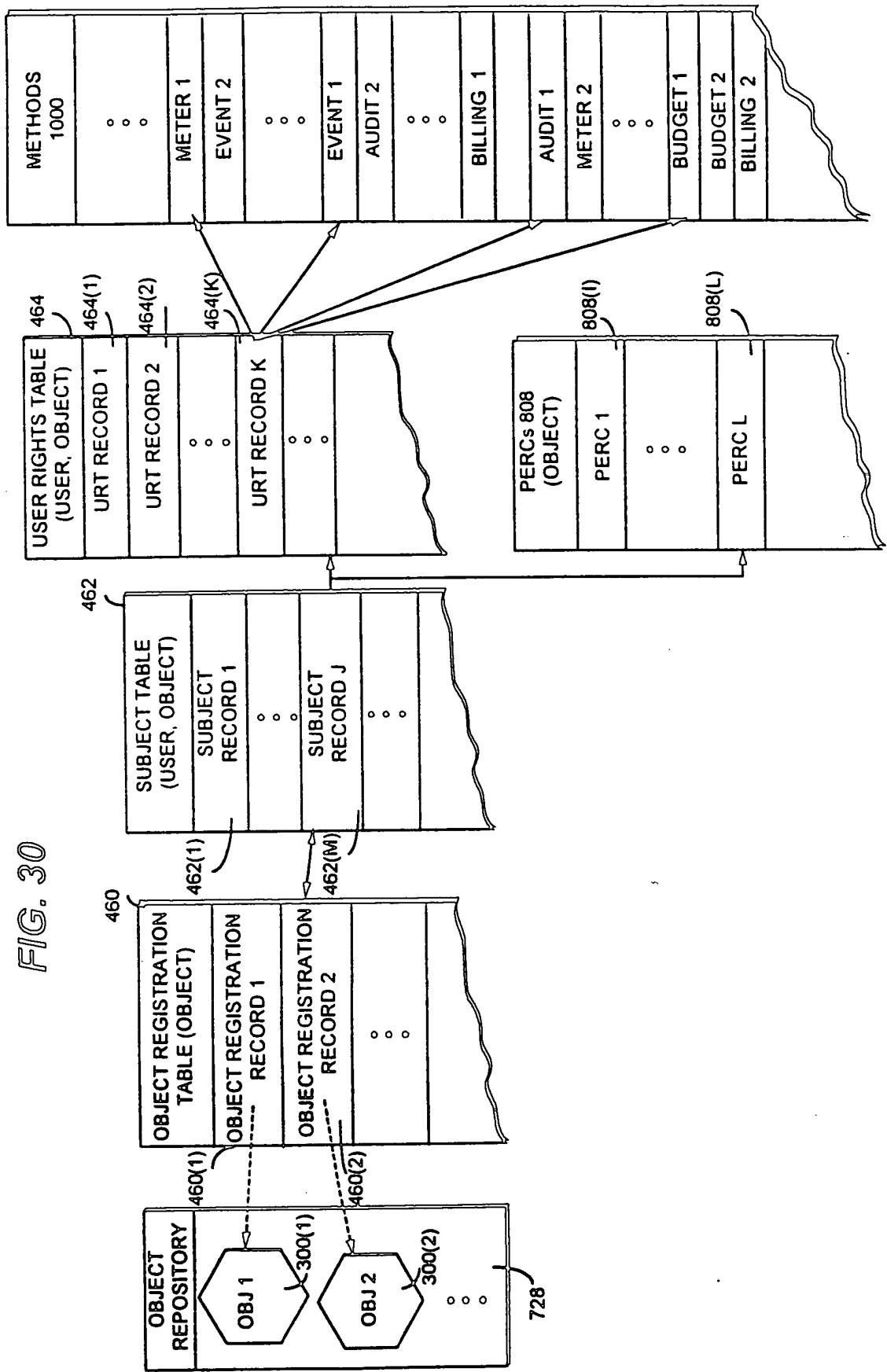
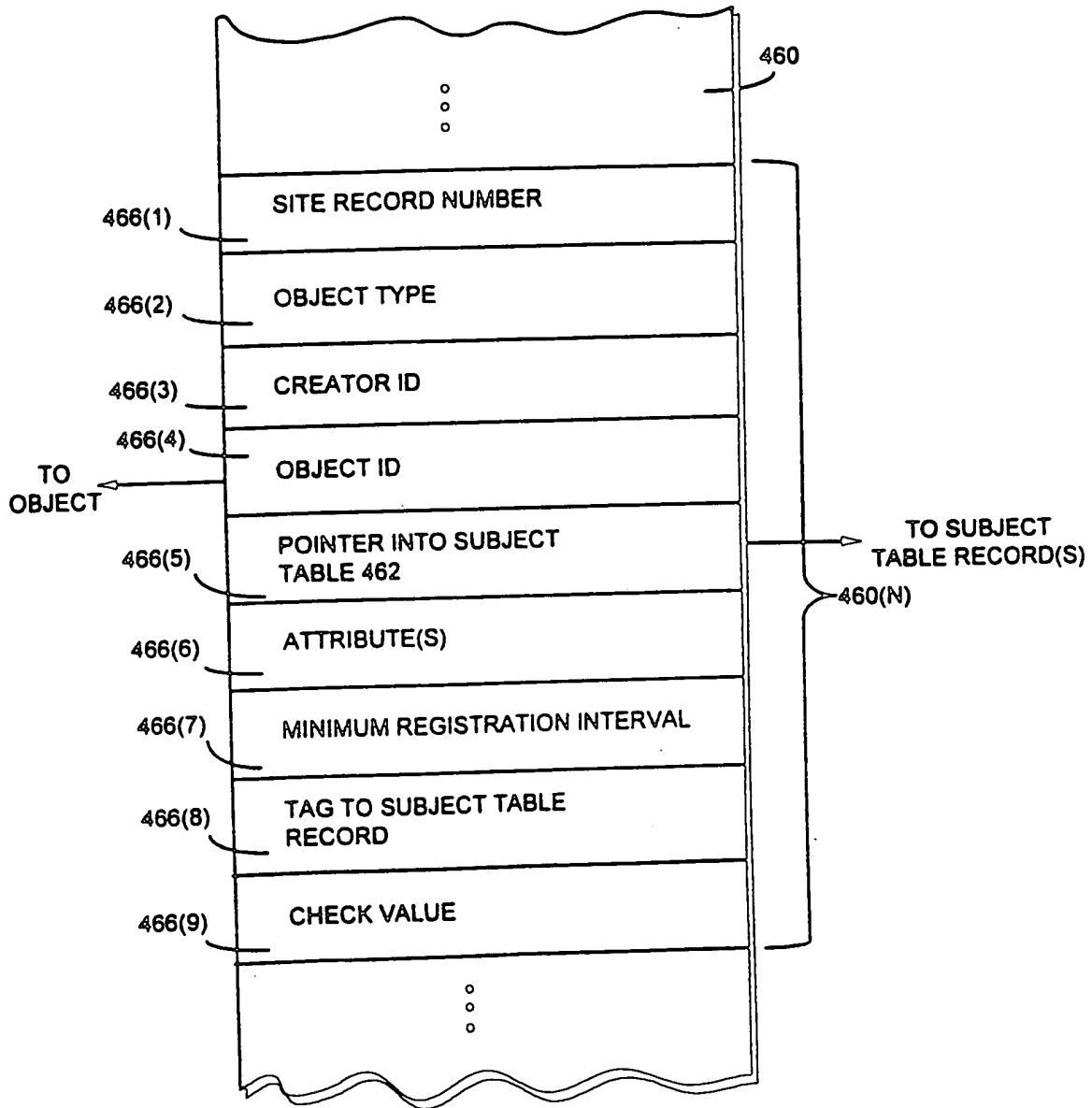


FIG. 30





*FIG. 31*  
OBJECT REGISTRATION TABLE

FIG. 32

SUBJECT  
TABLE

"HEADER"  
468

SUBJECT  
RECORD  
470(1)

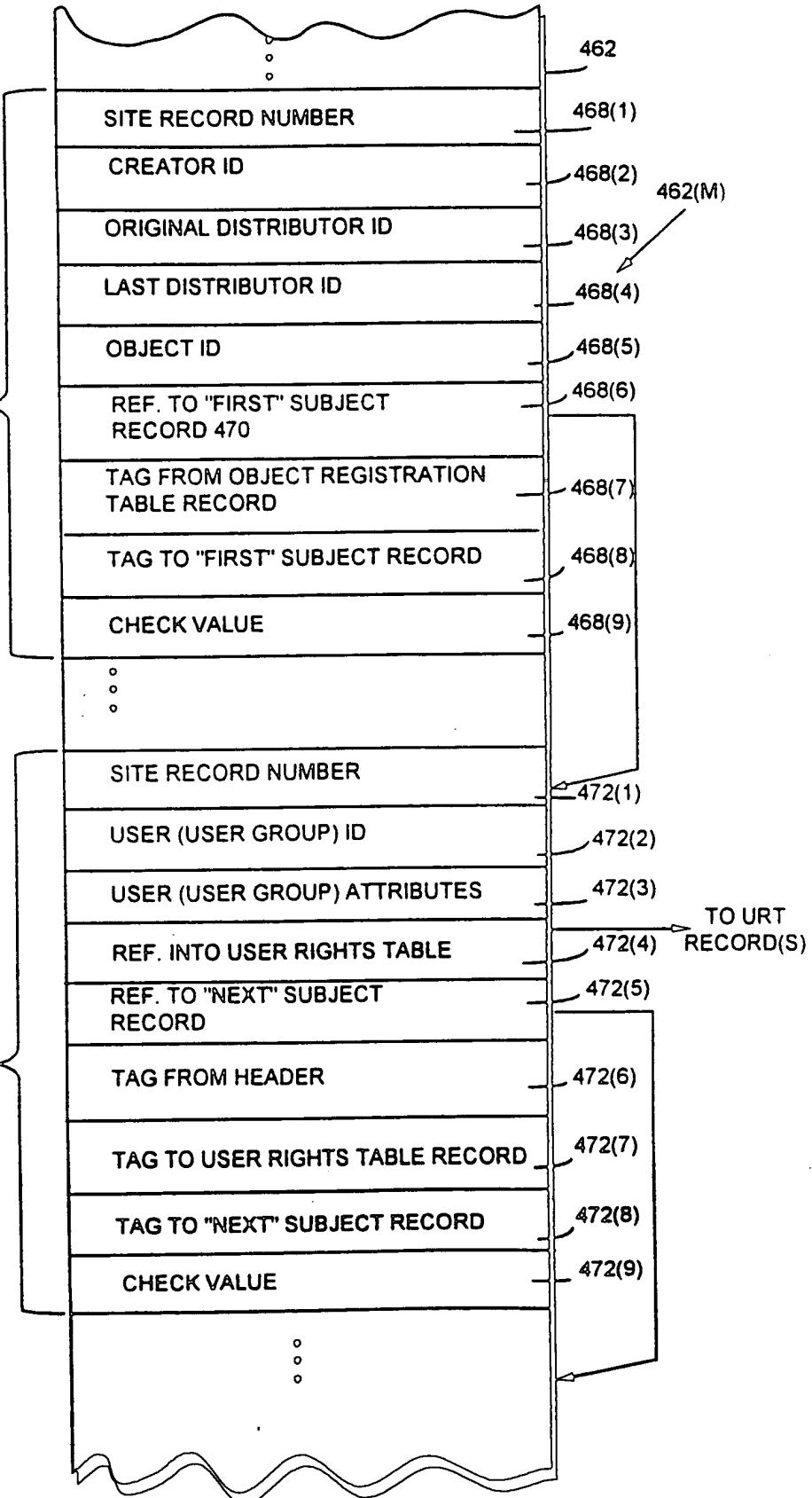


FIG. 33 USER RIGHTS TABLE

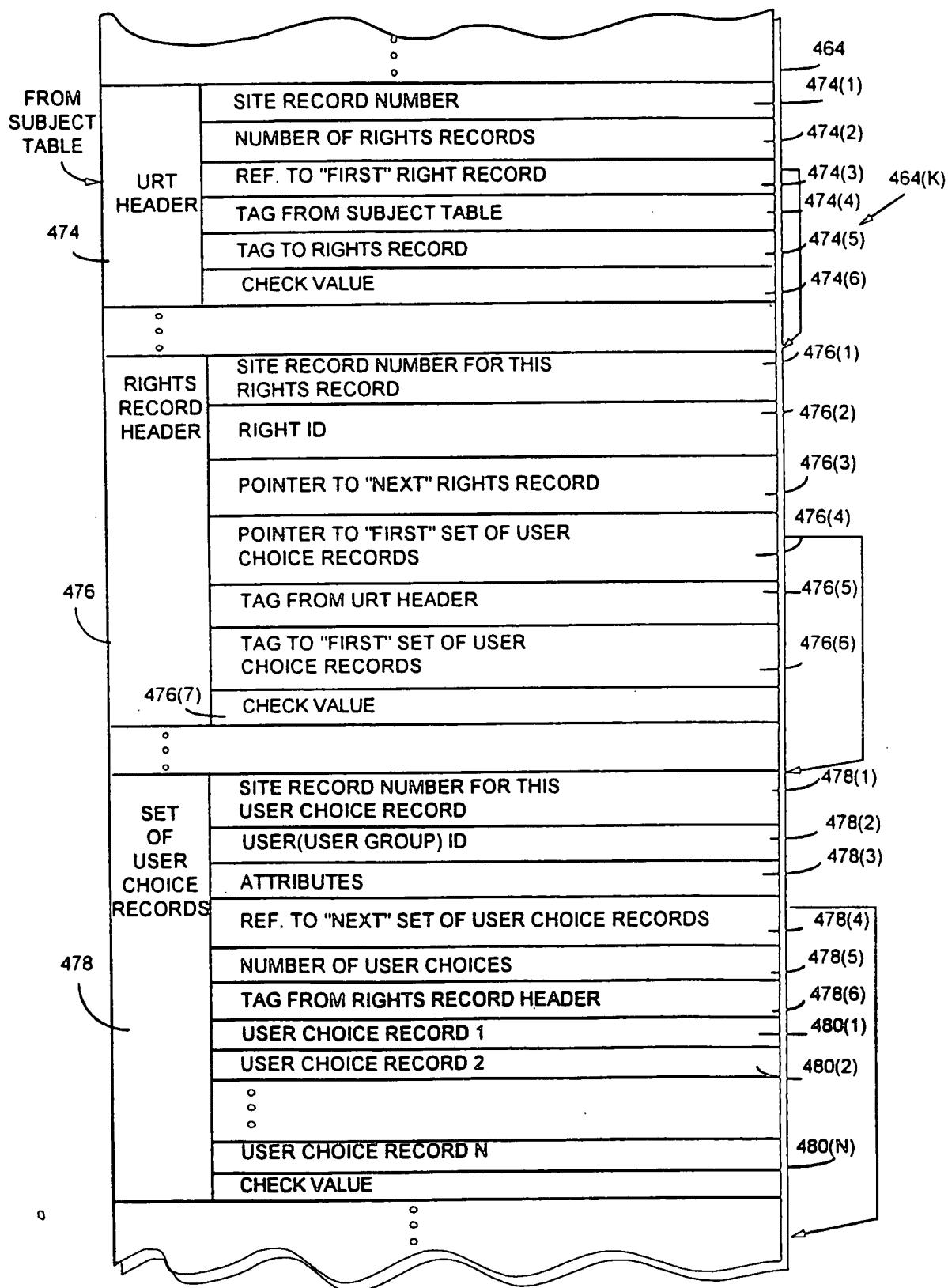


FIG. 34A

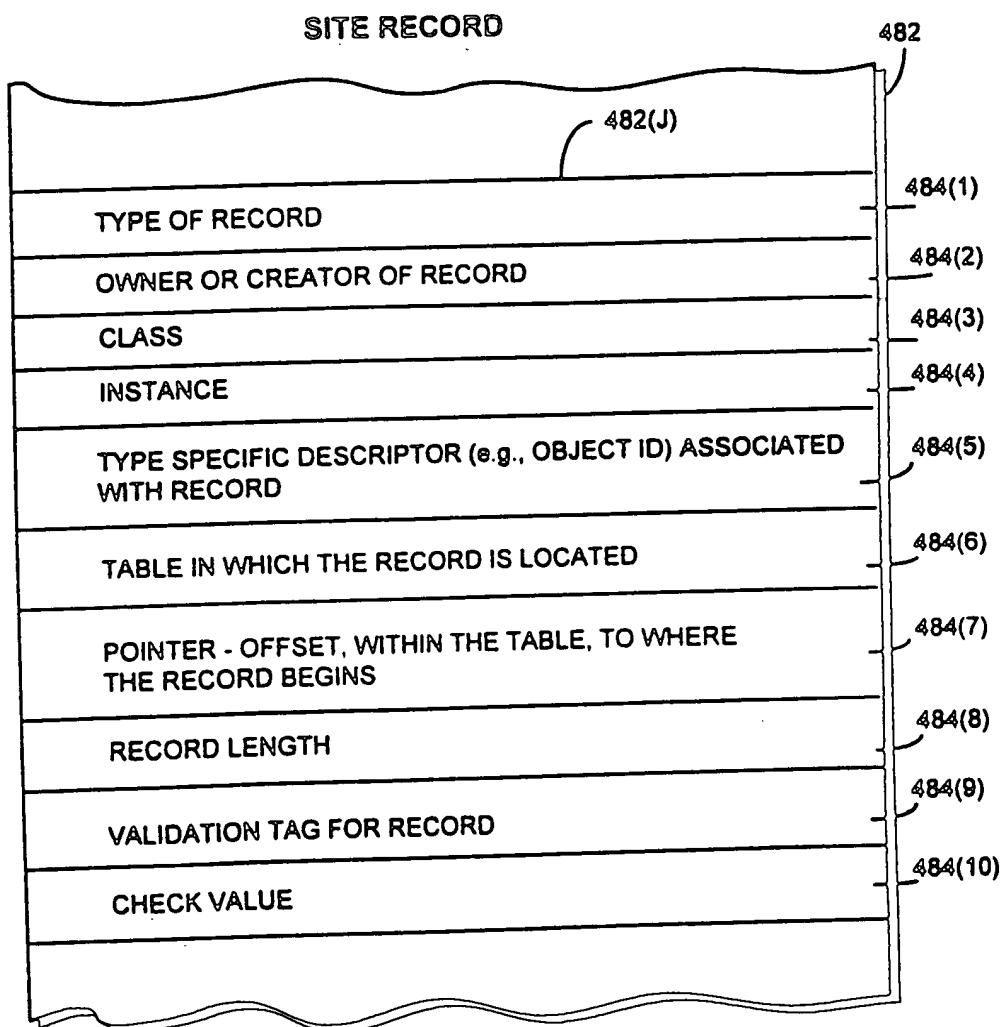


FIG. 34

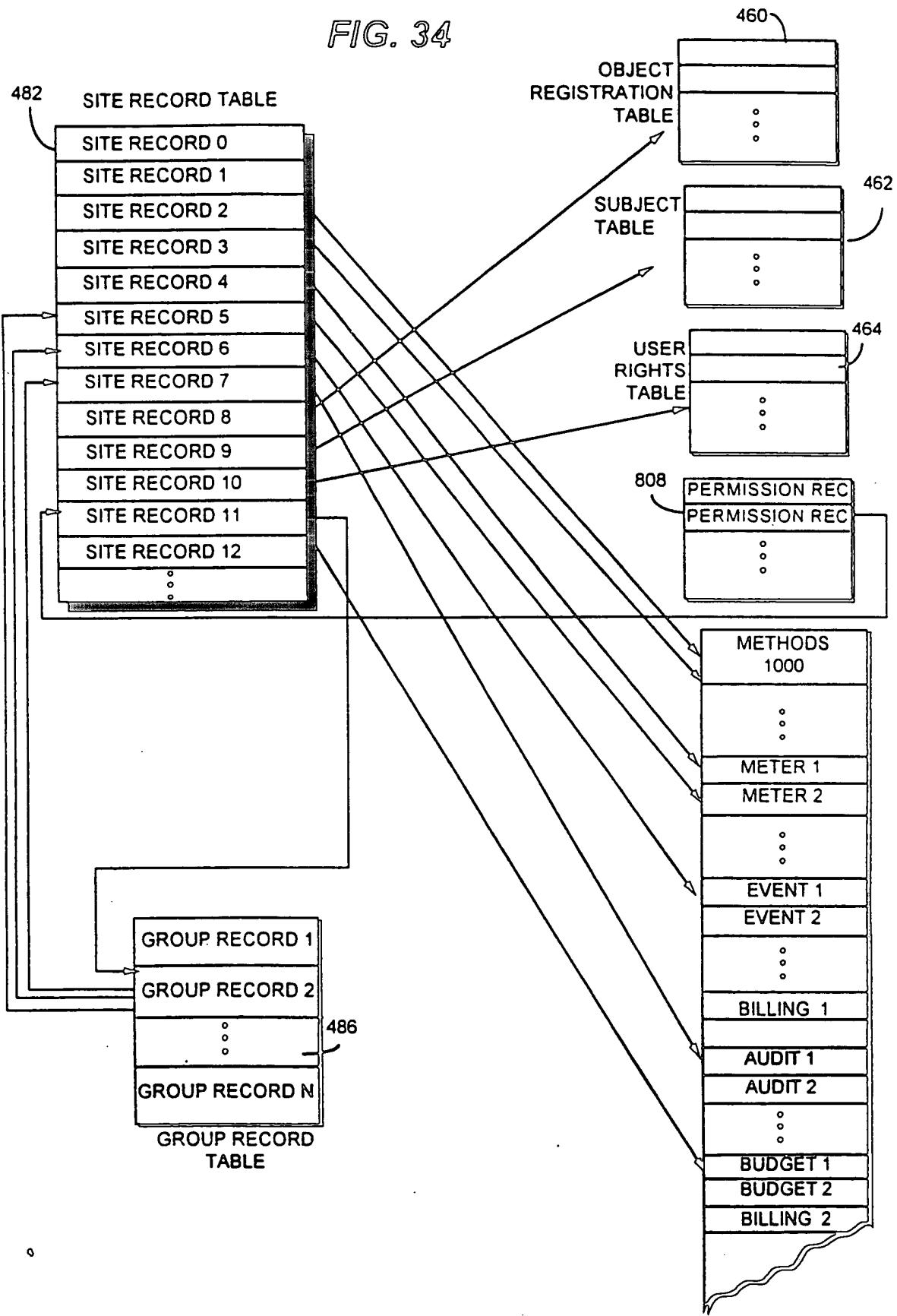


FIG. 34B

GROUP RECORD

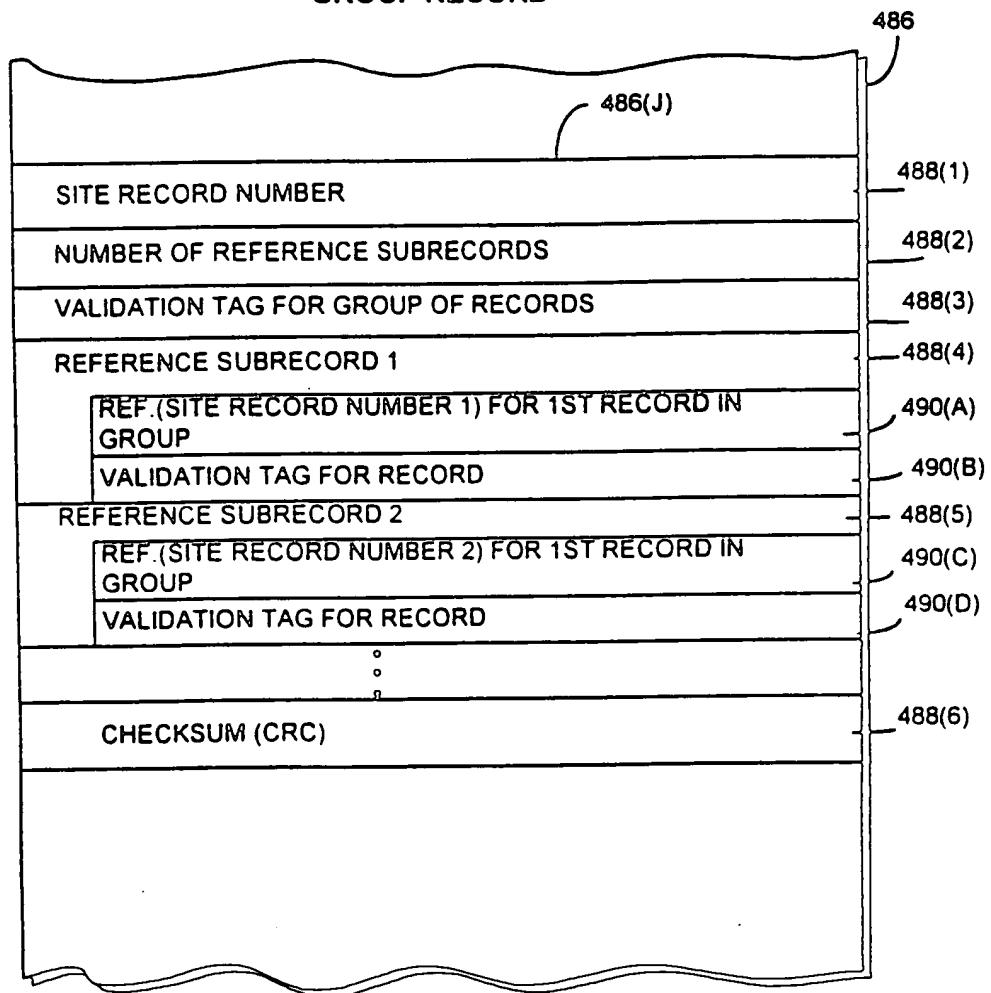


FIG. 35

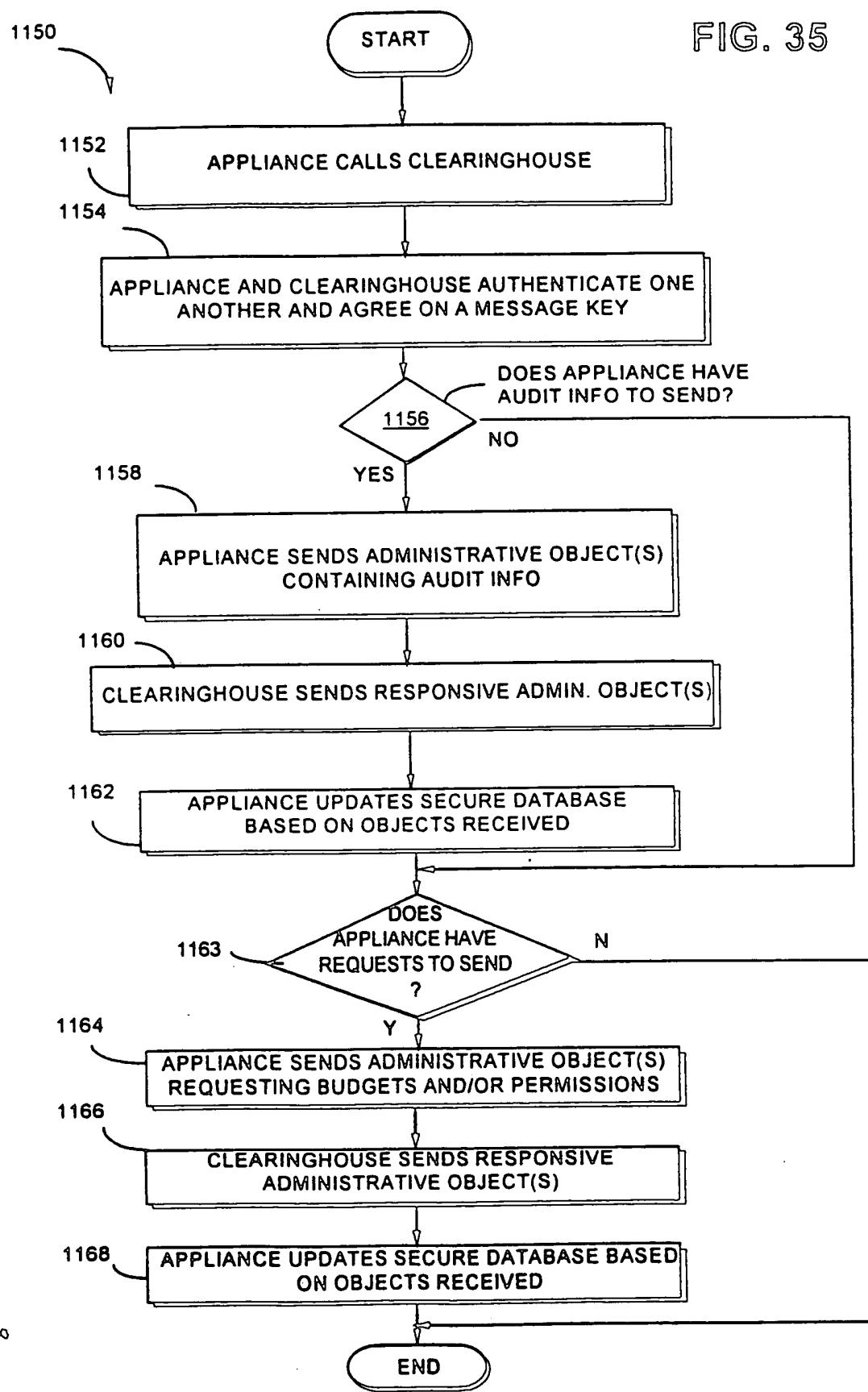


FIG. 36

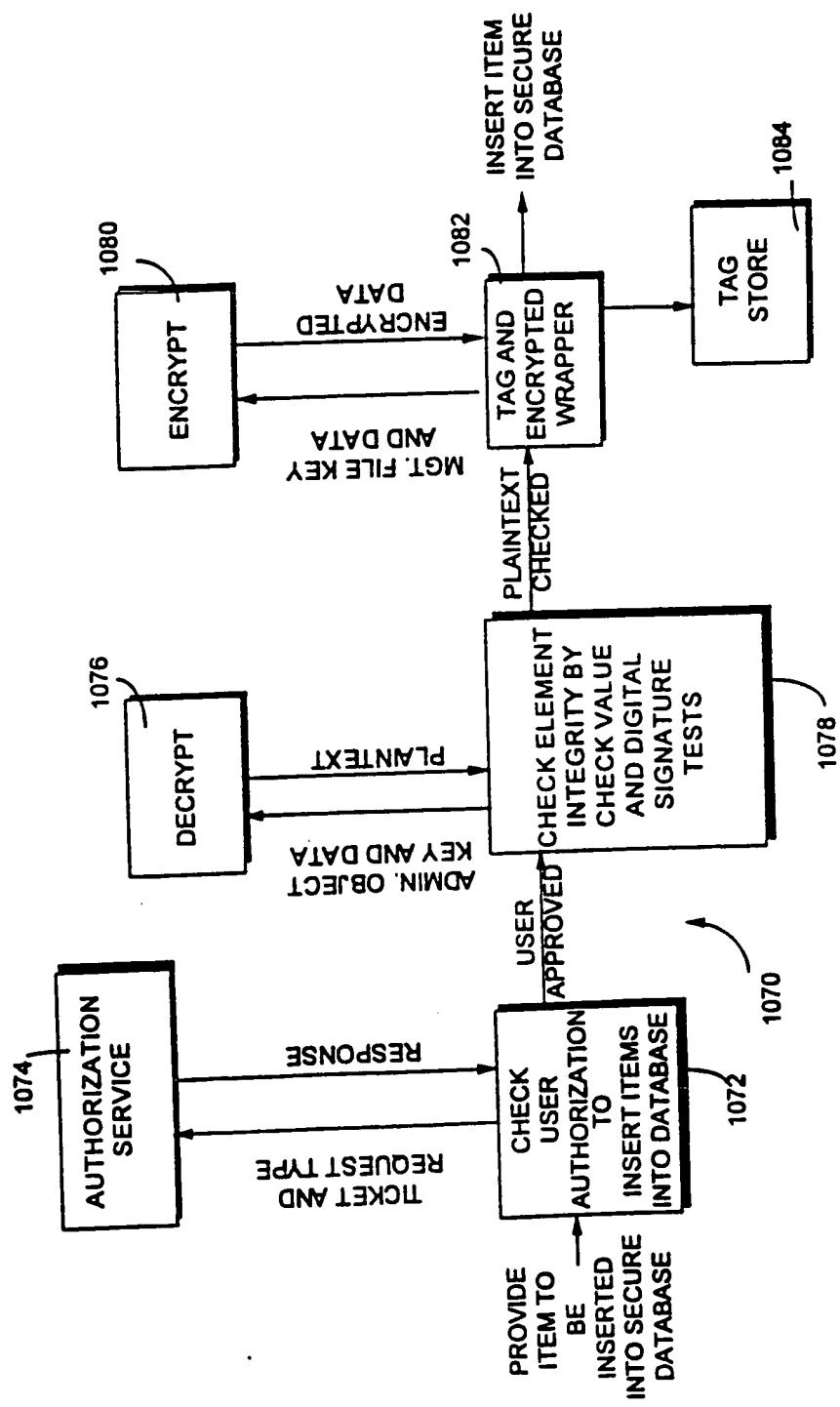


FIG. 37

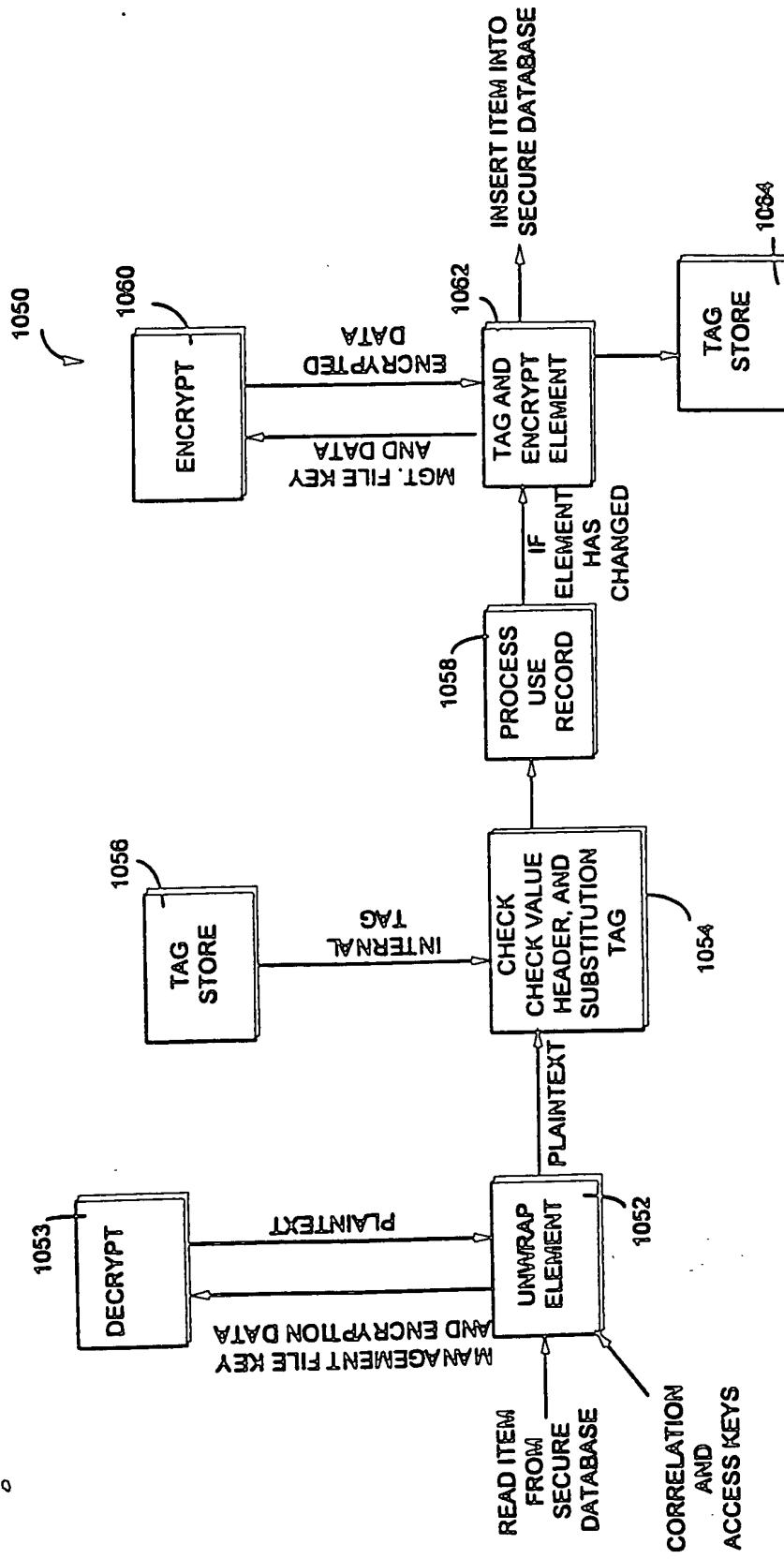


FIG. 38

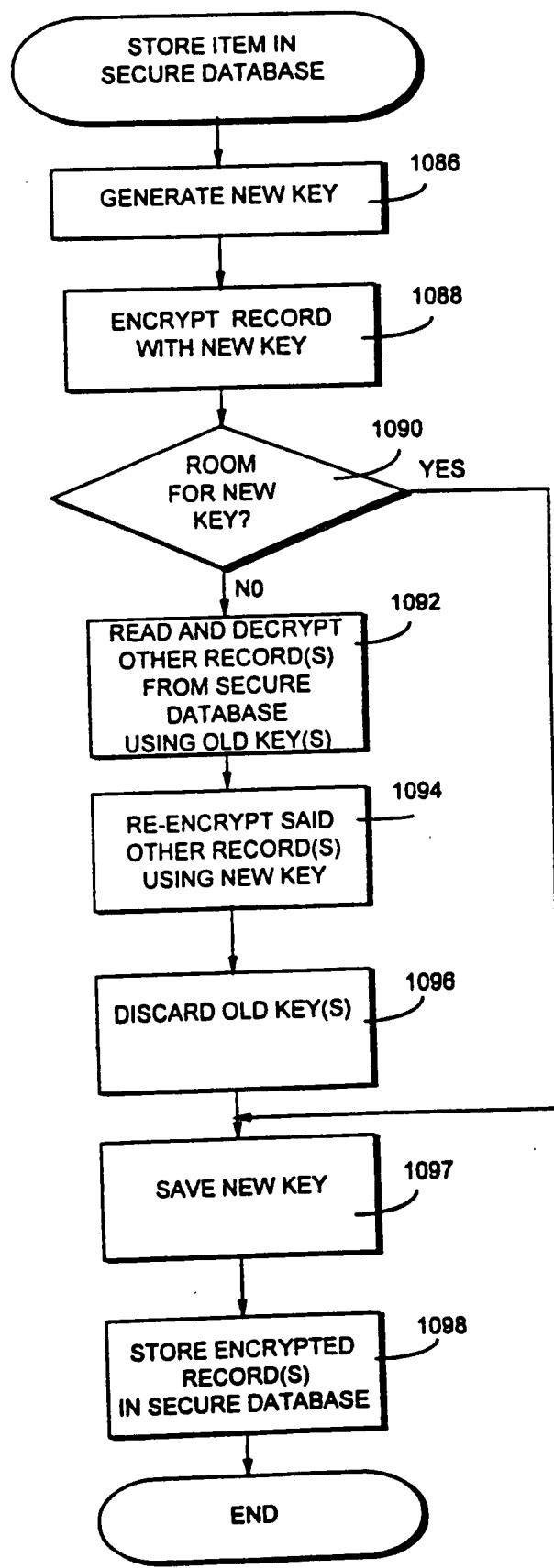
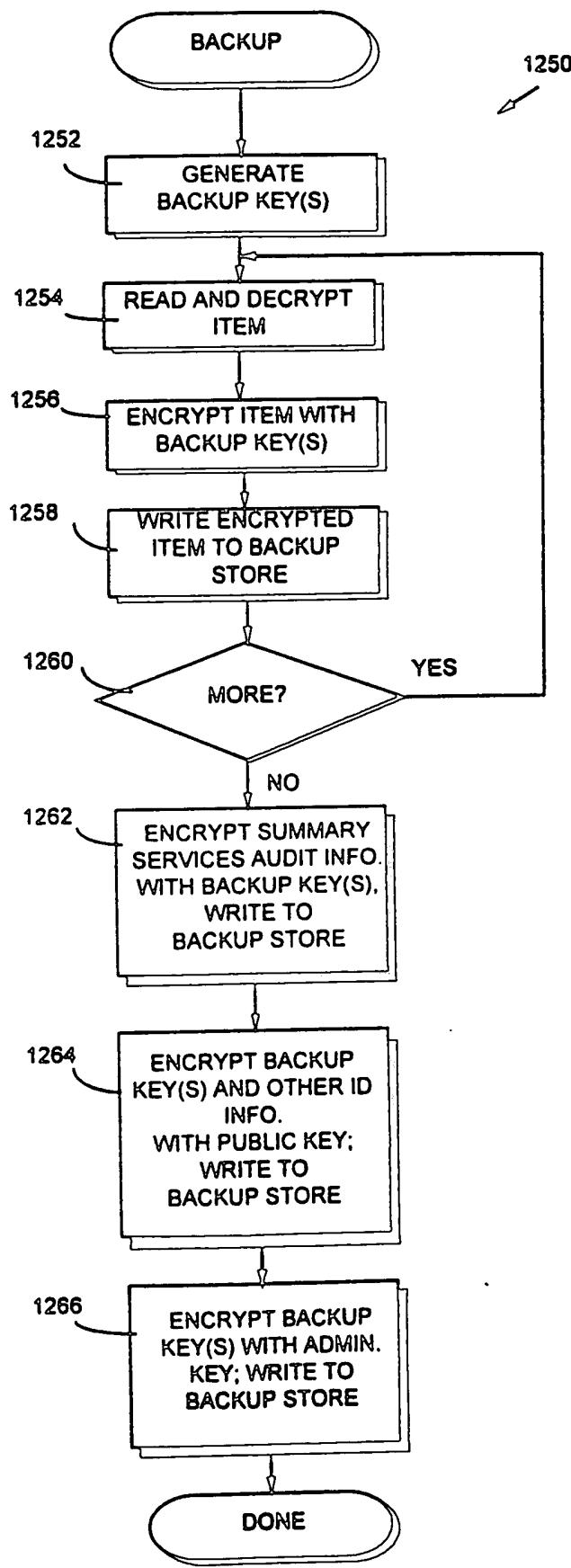
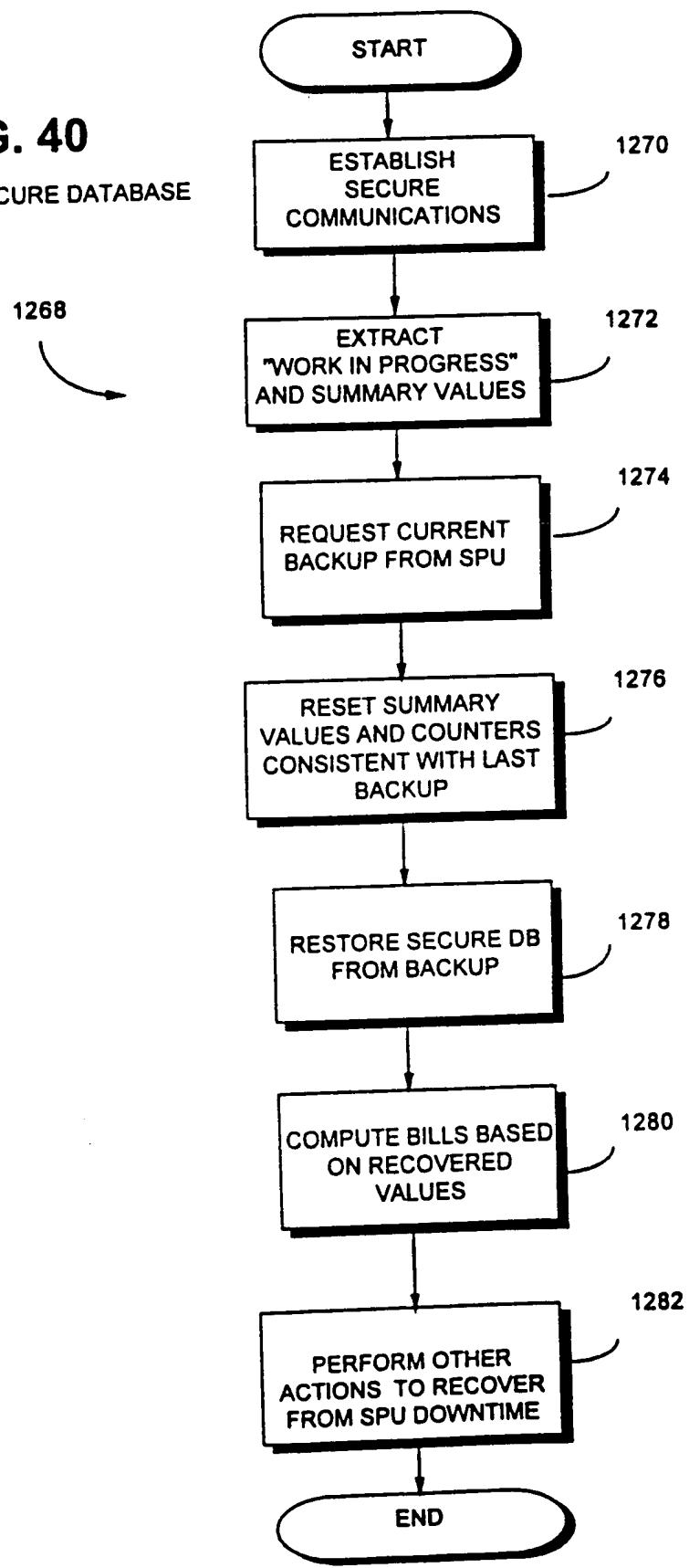


FIG. 39  
BACKUP



**FIG. 40**  
RECOVER SECURE DATABASE



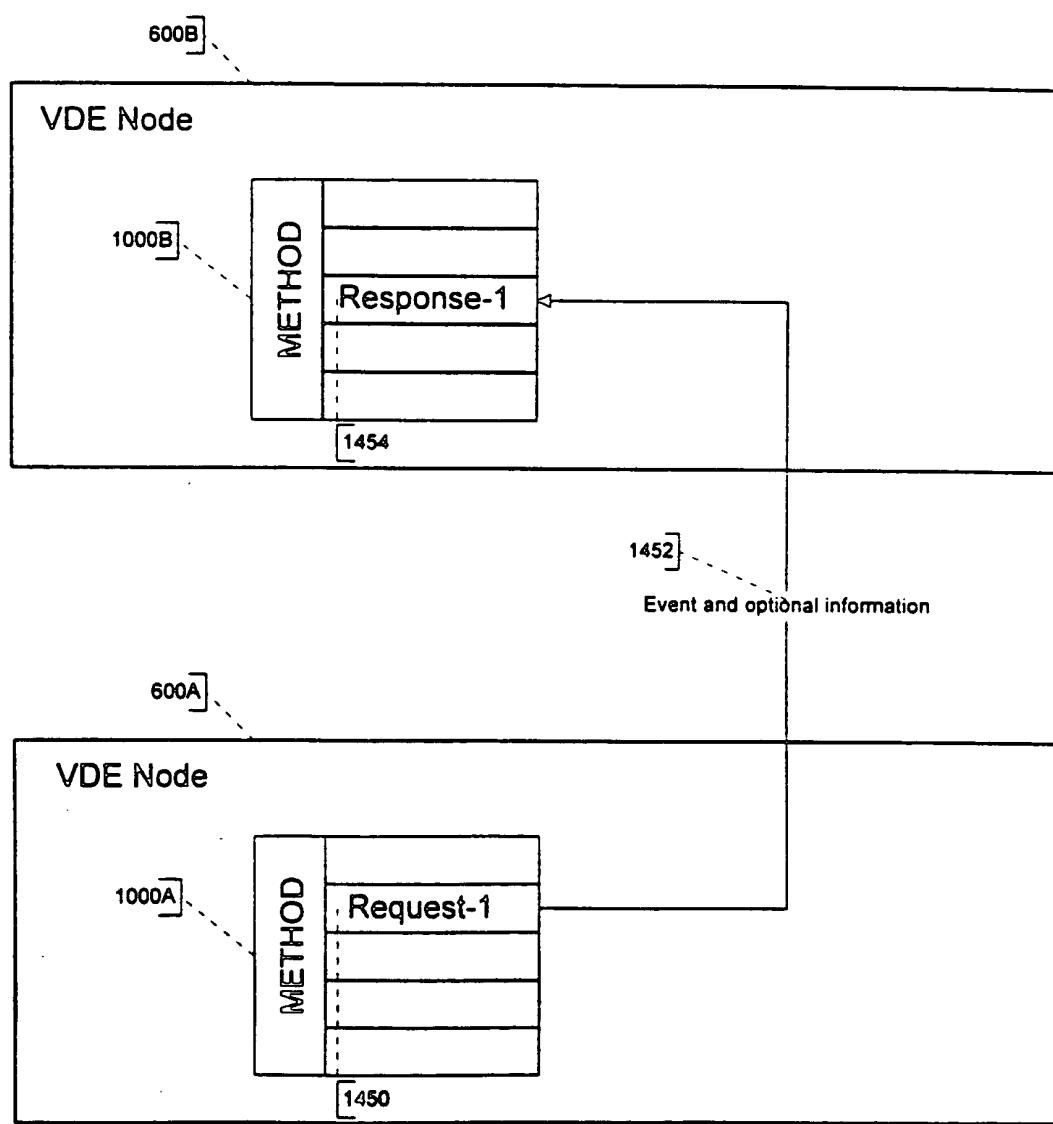


Figure 41a

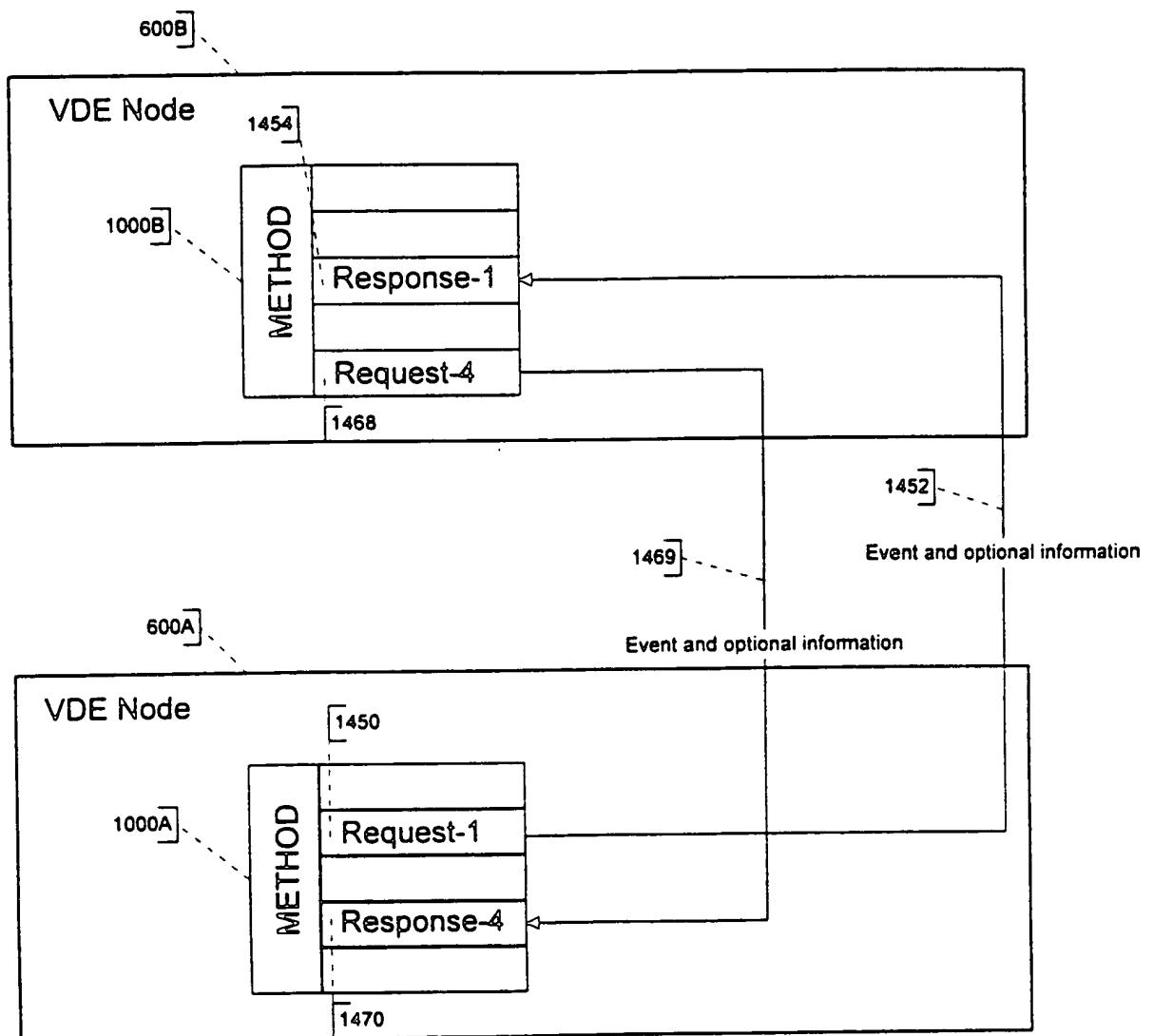


Figure 41b

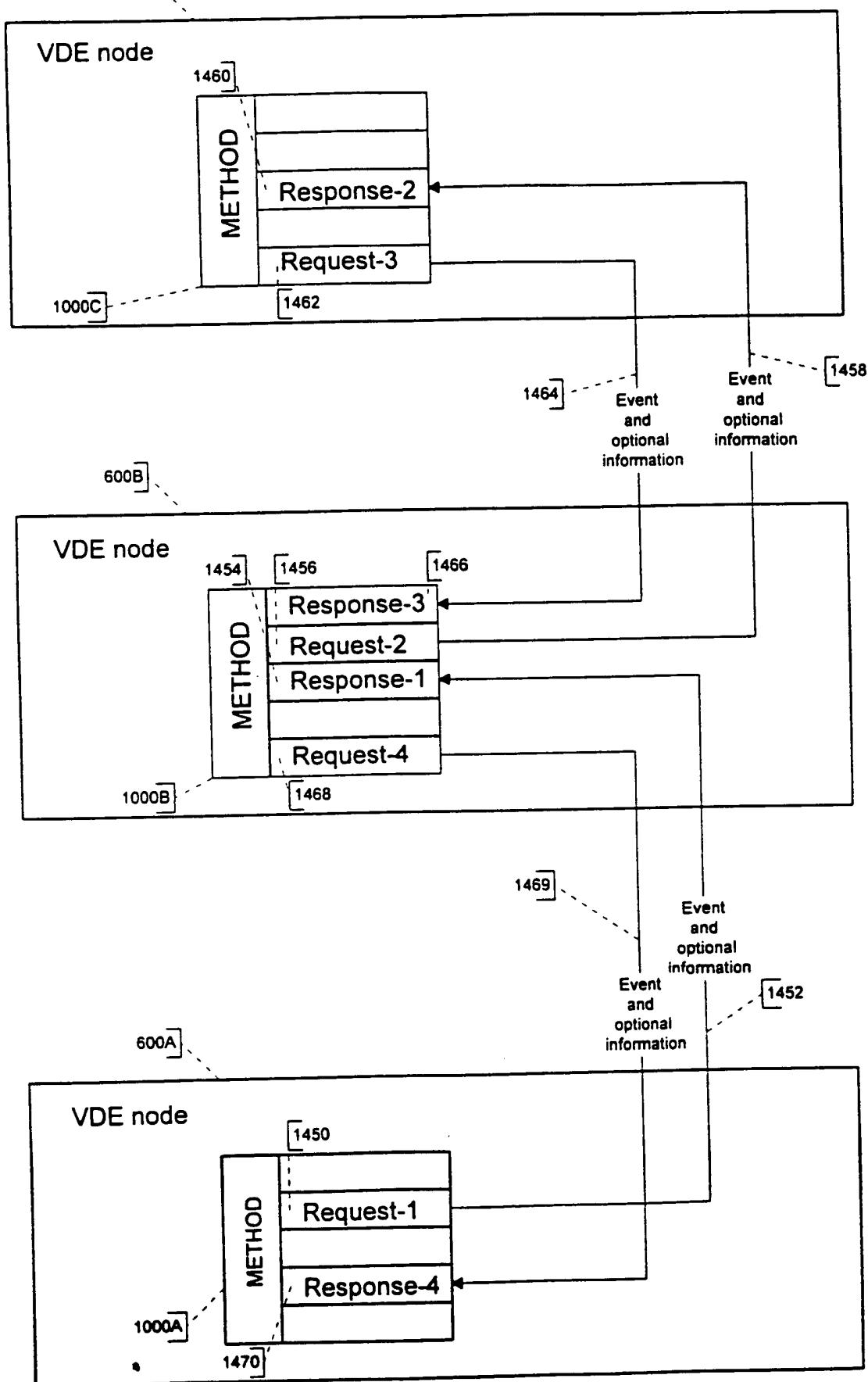


Figure 41c

102

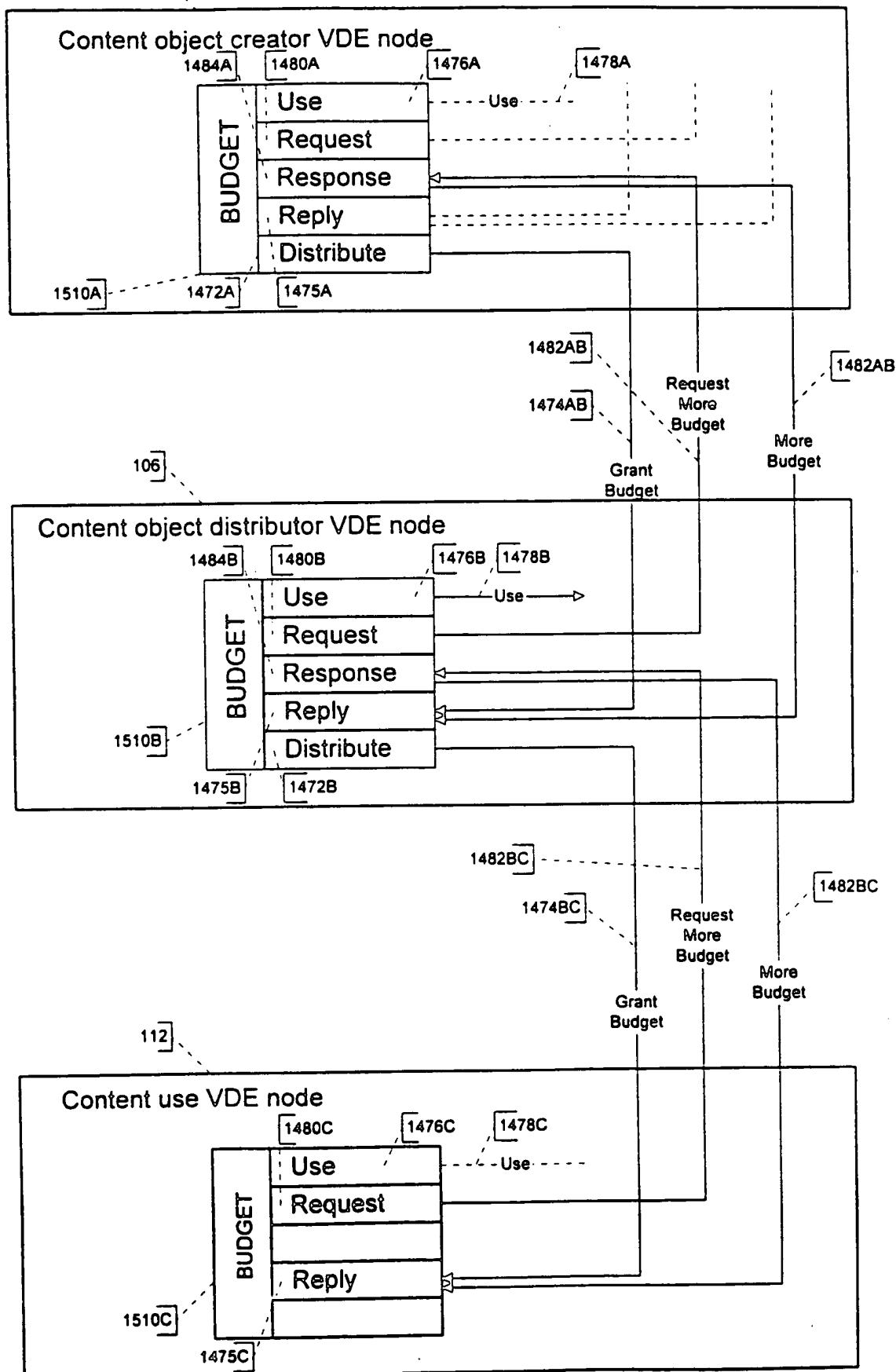


Figure 41d

# BUDGET Method Use Process Flow

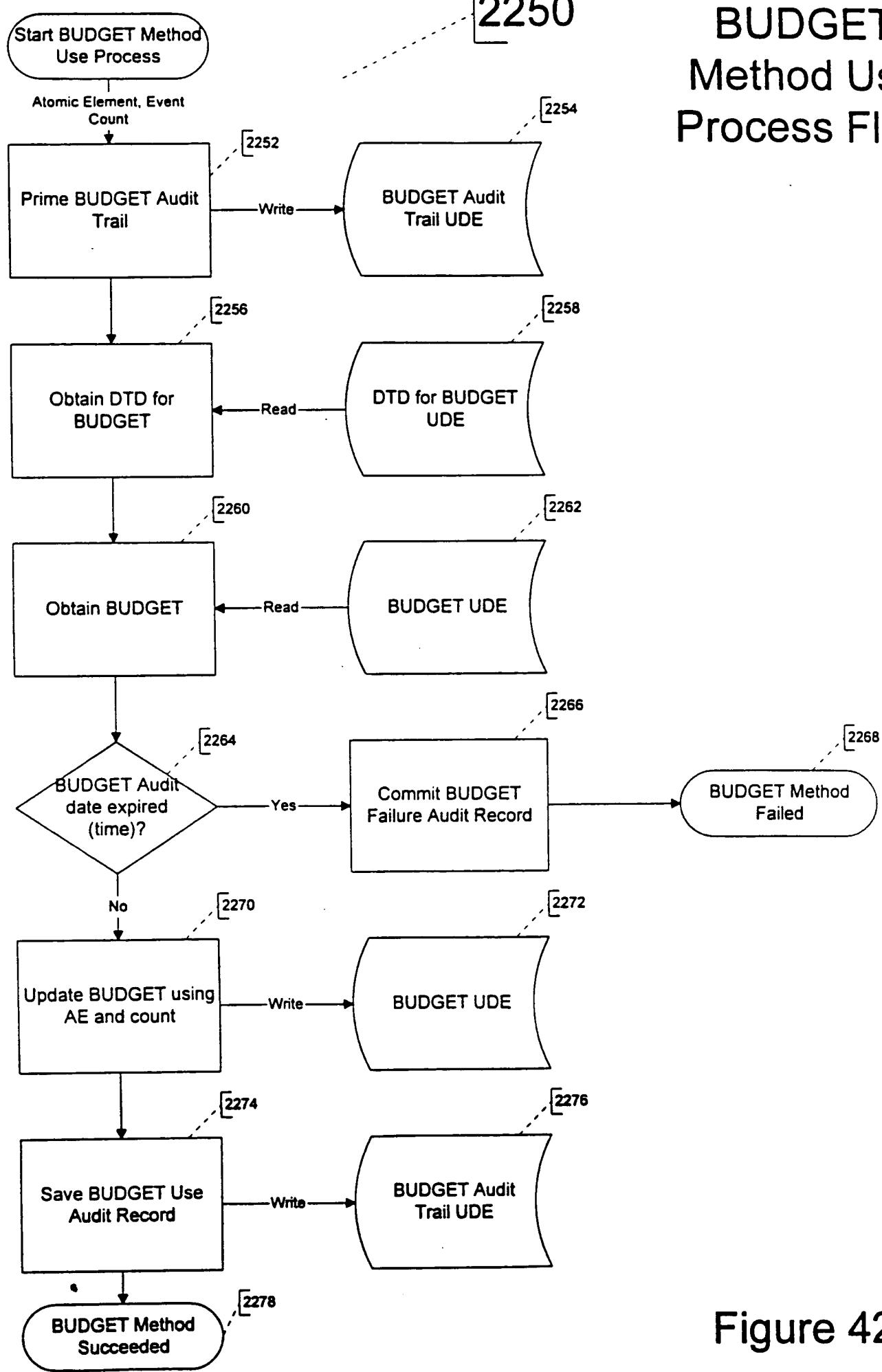


Figure 42a

# 2250 BUDGET Method Administrative Request Process Flow

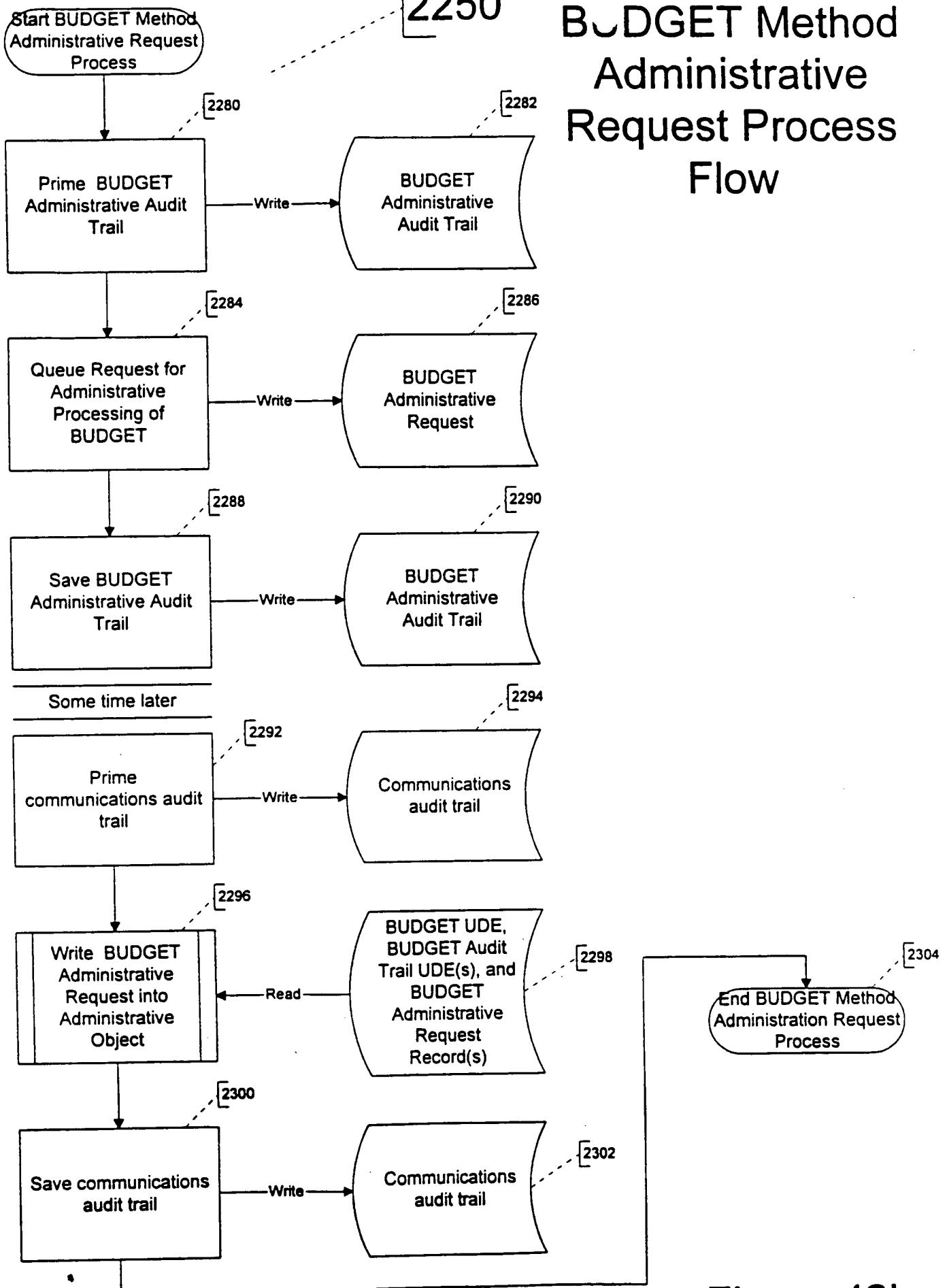


Figure 42b

# BUDGET Method Administrative Response Process Flow

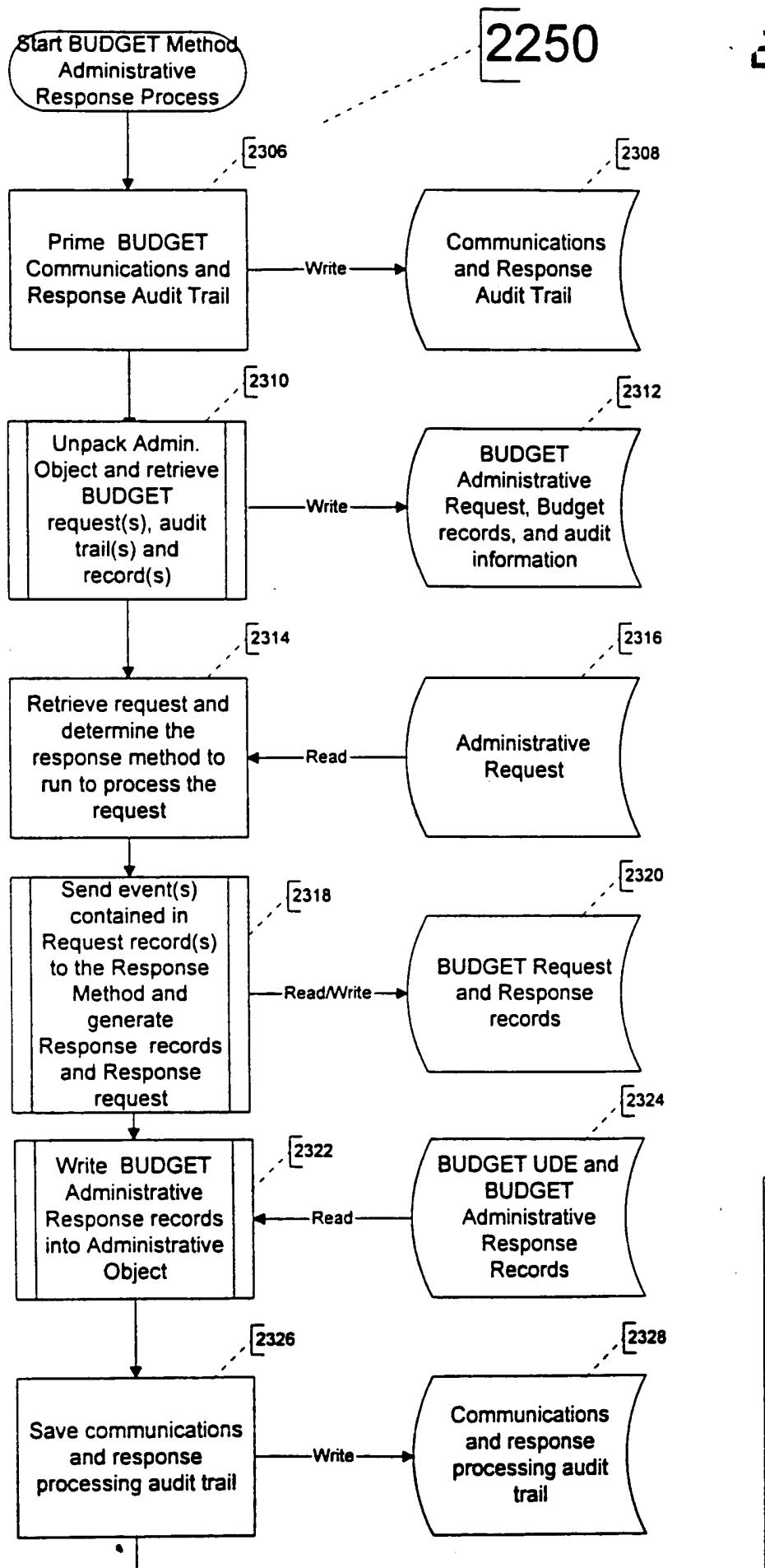


Figure 42c

Start BUDGET Method  
Administrative Reply  
Process

Prime BUDGET  
Administrative and  
Communications Audit  
Trail

Extract Response  
Records and  
Requests from  
Administrative  
Object and write  
Reply records to  
the secure  
database

Save BUDGET  
Administrative and  
Communications Audit  
Trail

Some time later

Prime audit trail (if  
required)

Retrieve Reply record  
and determine method  
required to process it

Send event(s)  
contained in Reply  
record(s) to the  
Reply method and  
generate / update  
database records

Delete Reply record(s)  
from database

2250

# BUDGET Method Administrative Reply Process Flow

2332

BUDGET  
Administrative and  
Communications  
Audit Trail

2334

2336

BUDGET Reply  
Records and  
Requests

2338

2340

BUDGET  
Administrative and  
Communications  
Audit Trail

2341

2355

Audit Trail UDE

Write

2342

Audit Trail UDE

2343

2354

Prime audit trail (if  
required)

2344

BUDGET Reply  
records

2346

End BUDGET Method  
Administration Reply  
Process

2348

BUDGET records

2350

2352

BUDGET Reply  
Record(s)

2353

Figure 42d

# REGISTER Method Use Process Flow

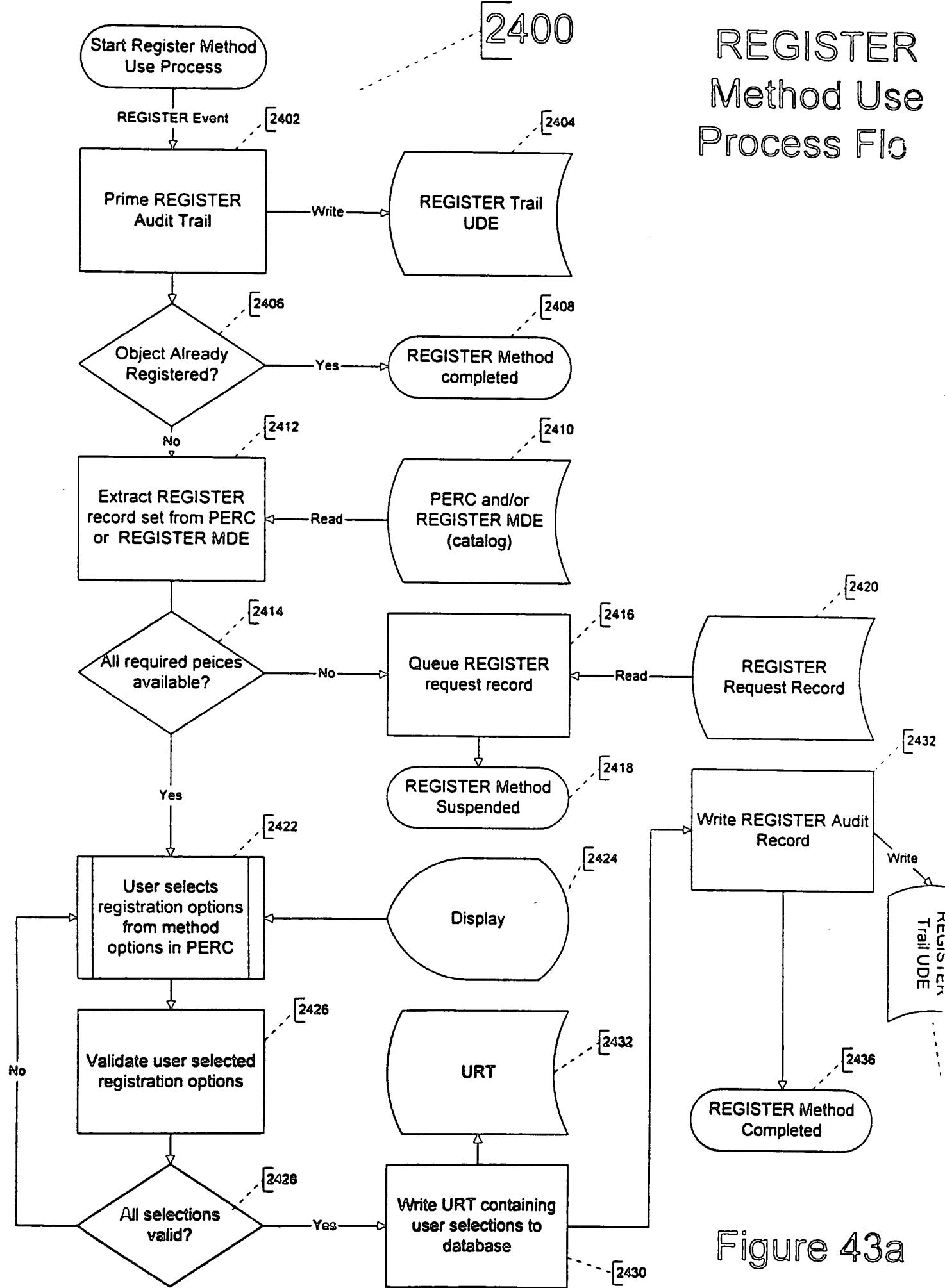


Figure 43a

# REGISTER Method Administrative Request Process Flow

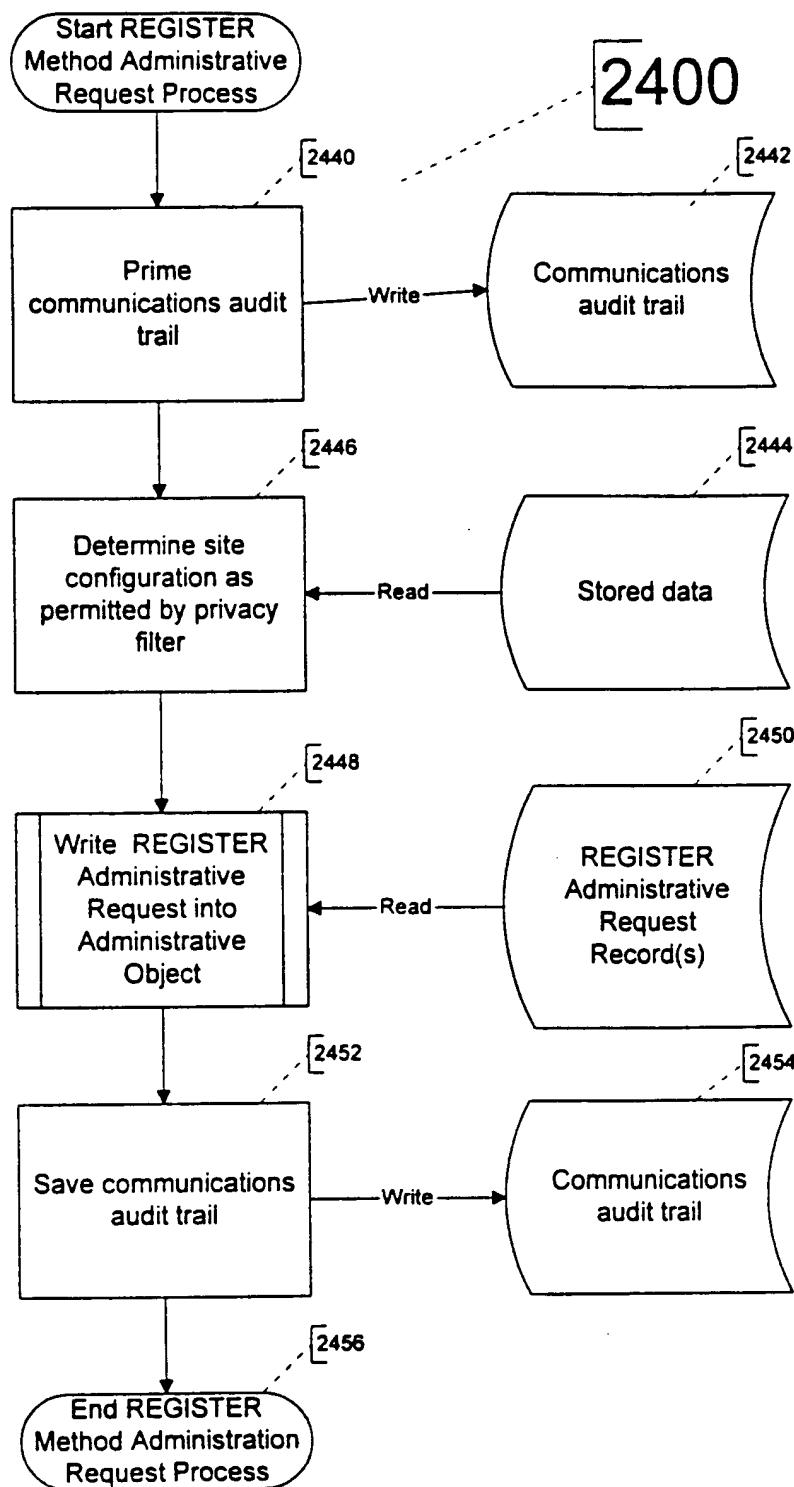


Figure 43b

# REGISTER Method Administrative Response Process Flow

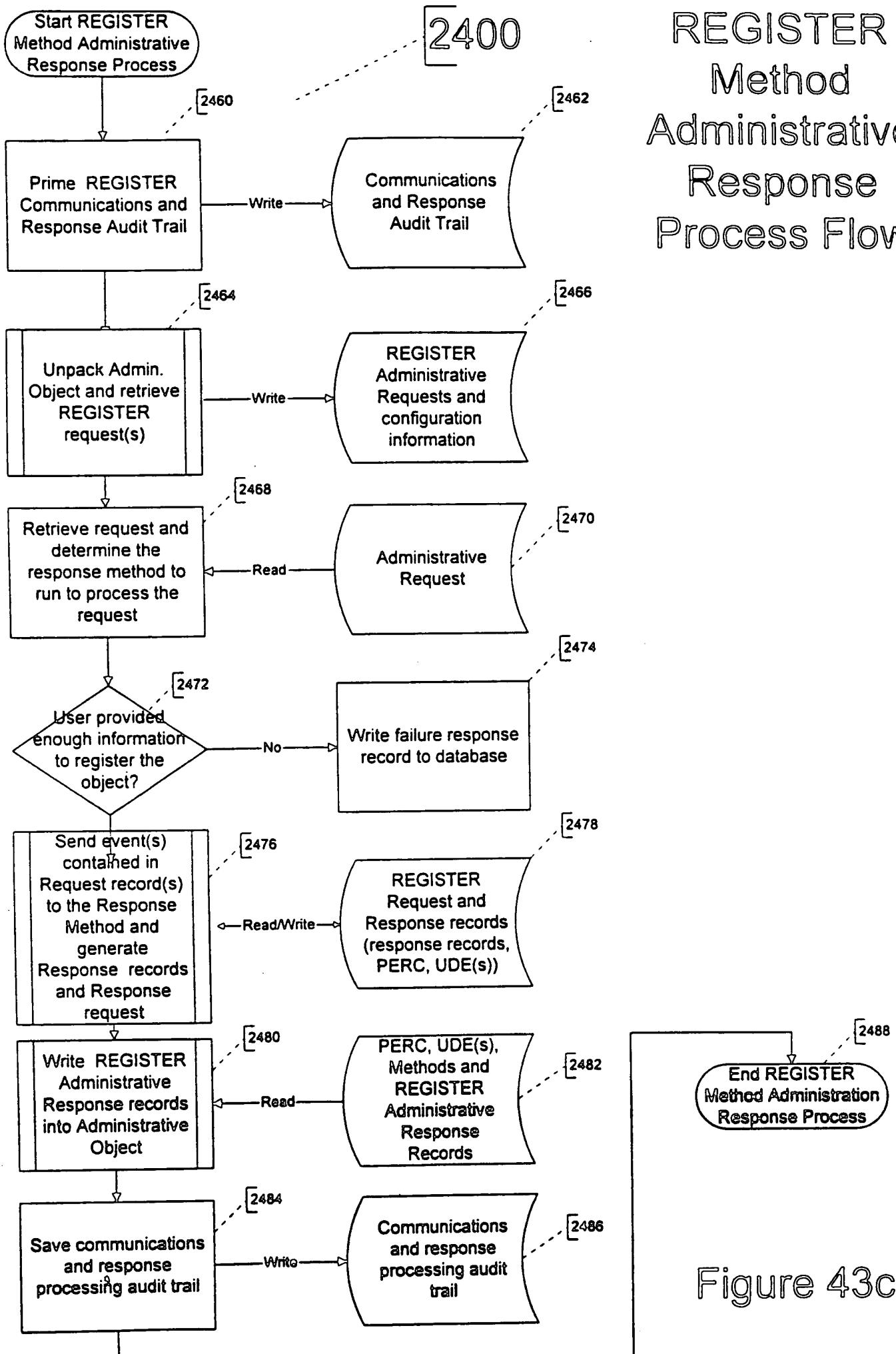


Figure 43c

# REGISTER

## Method

### Administrative Reply Process Flow

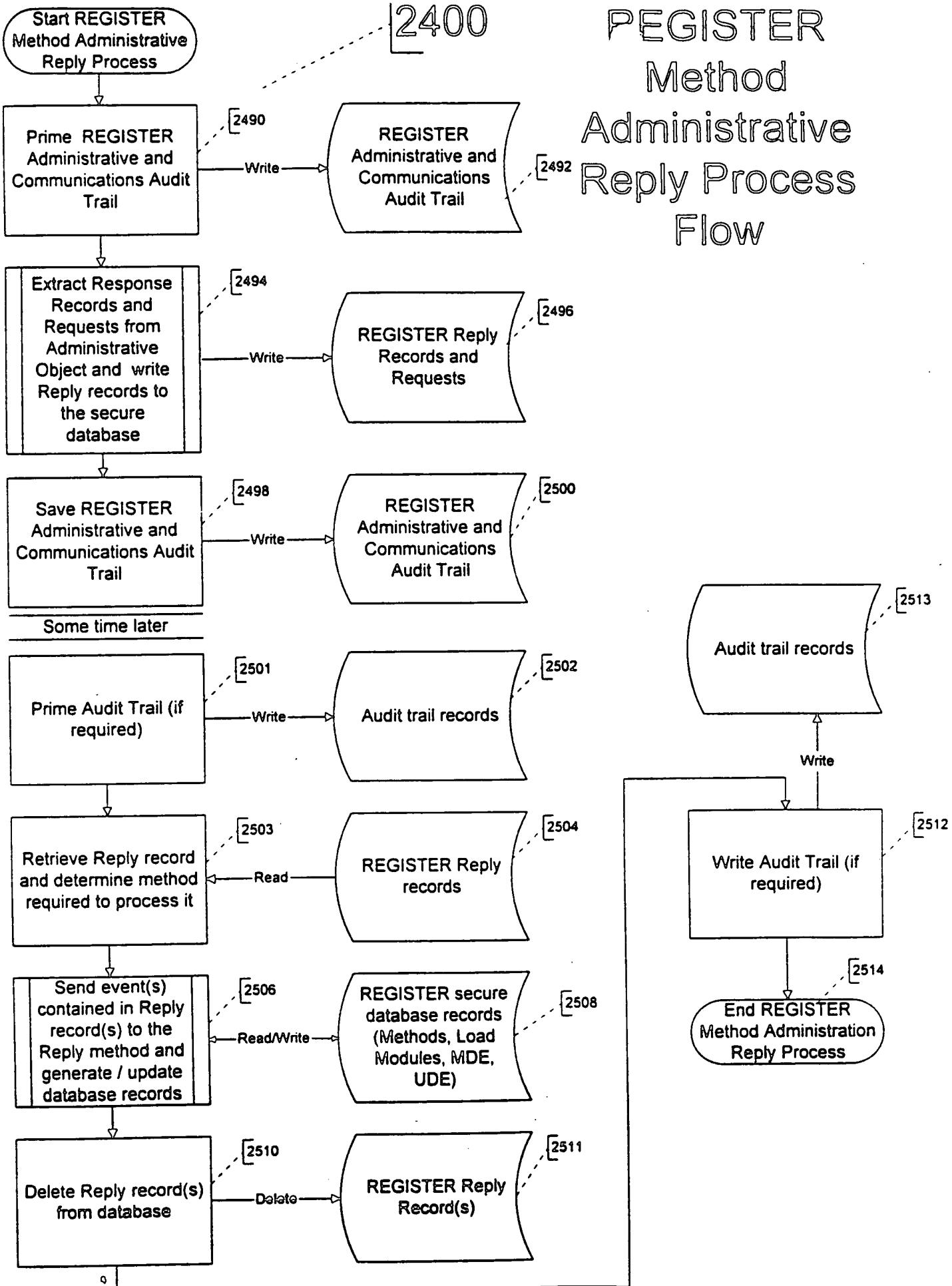


Figure 43d

Start AUDIT Method  
Administrative Request  
Process

2520

# AUDIT Method Administrative Request Process Flow

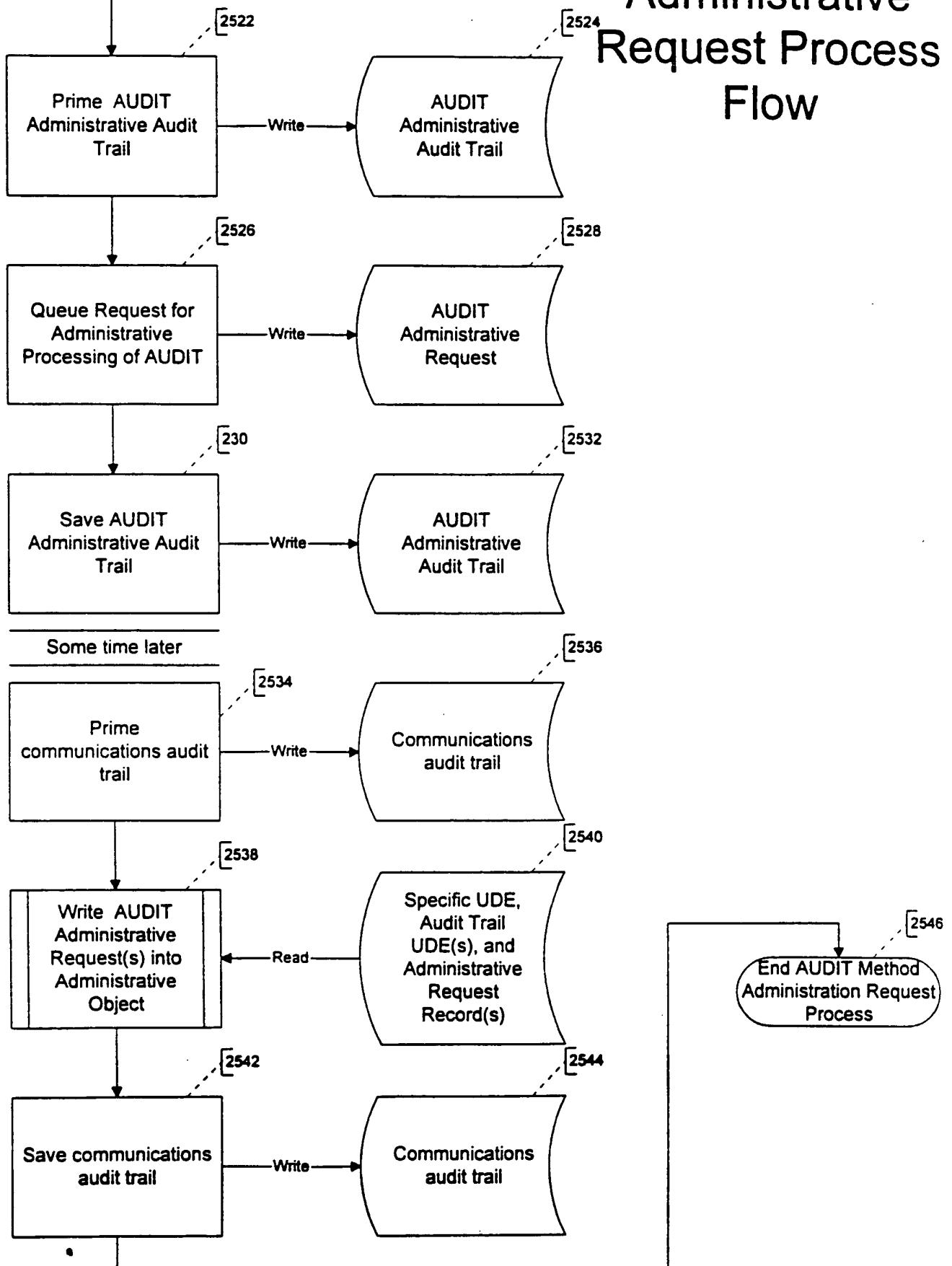


Figure 44a

# AUDIT Method Administrative Response Process Flow

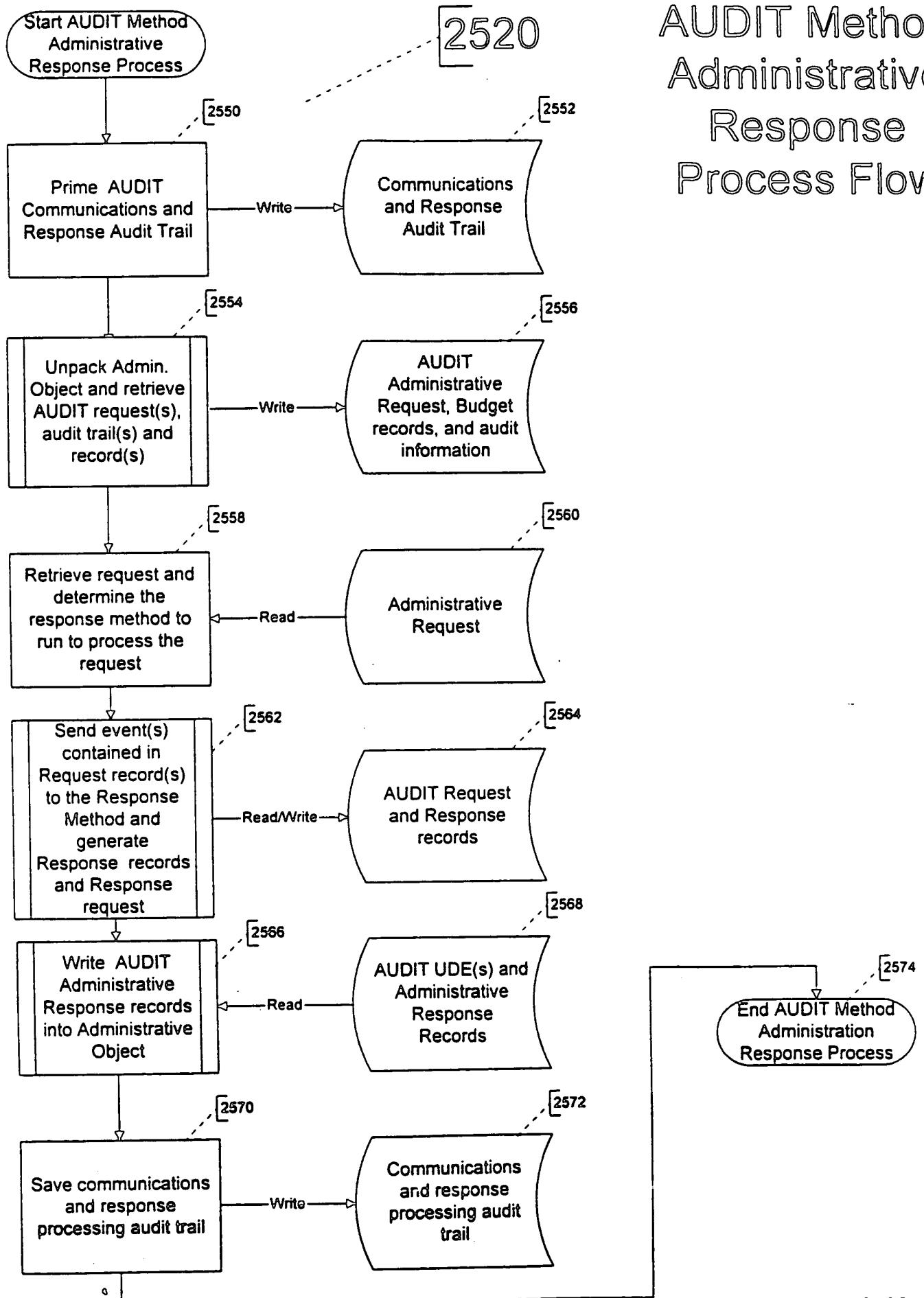


Figure 44b

2520

# AUDIT Method Administrative Reply Process Flow

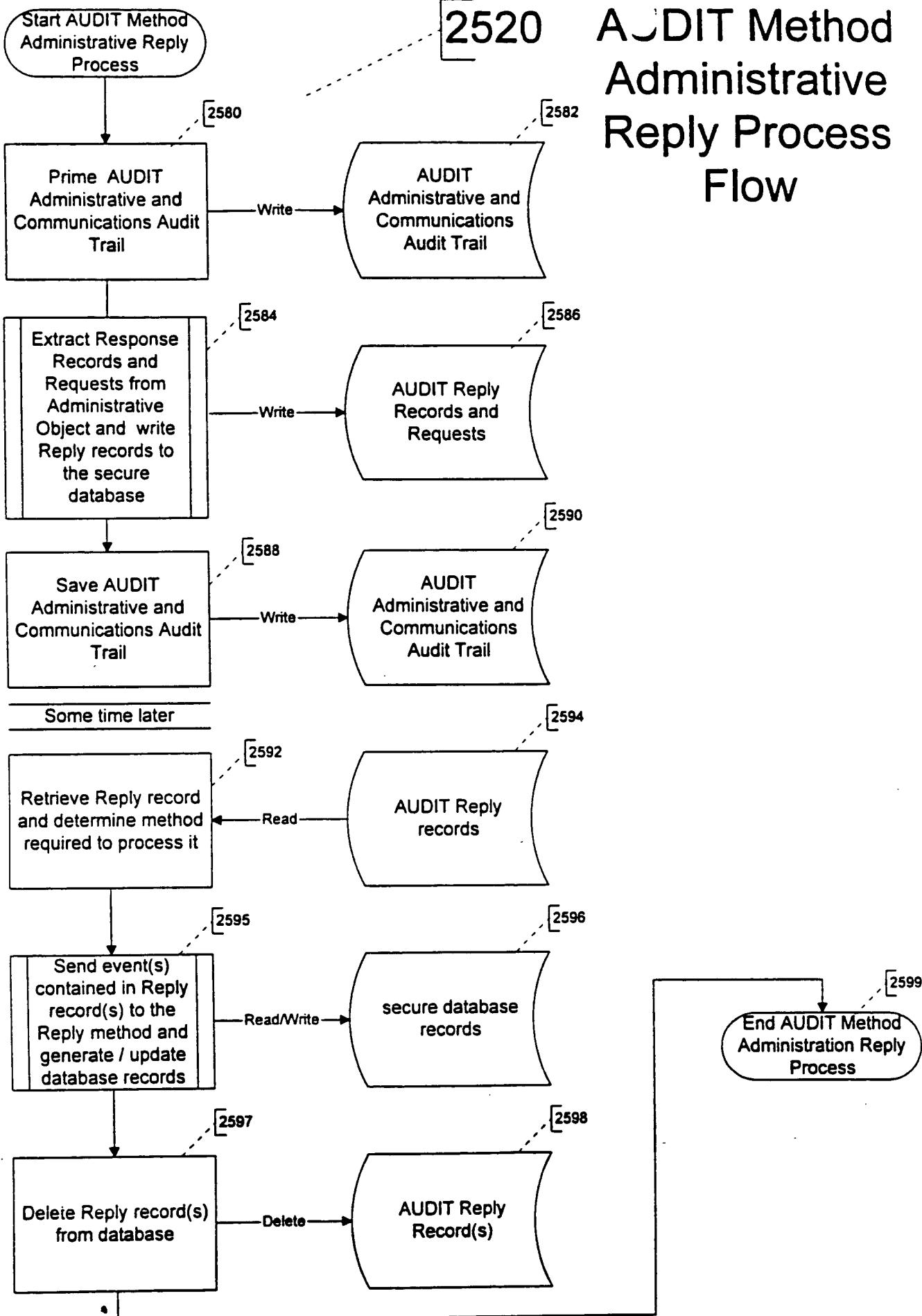


Figure 44c

FIG. 45

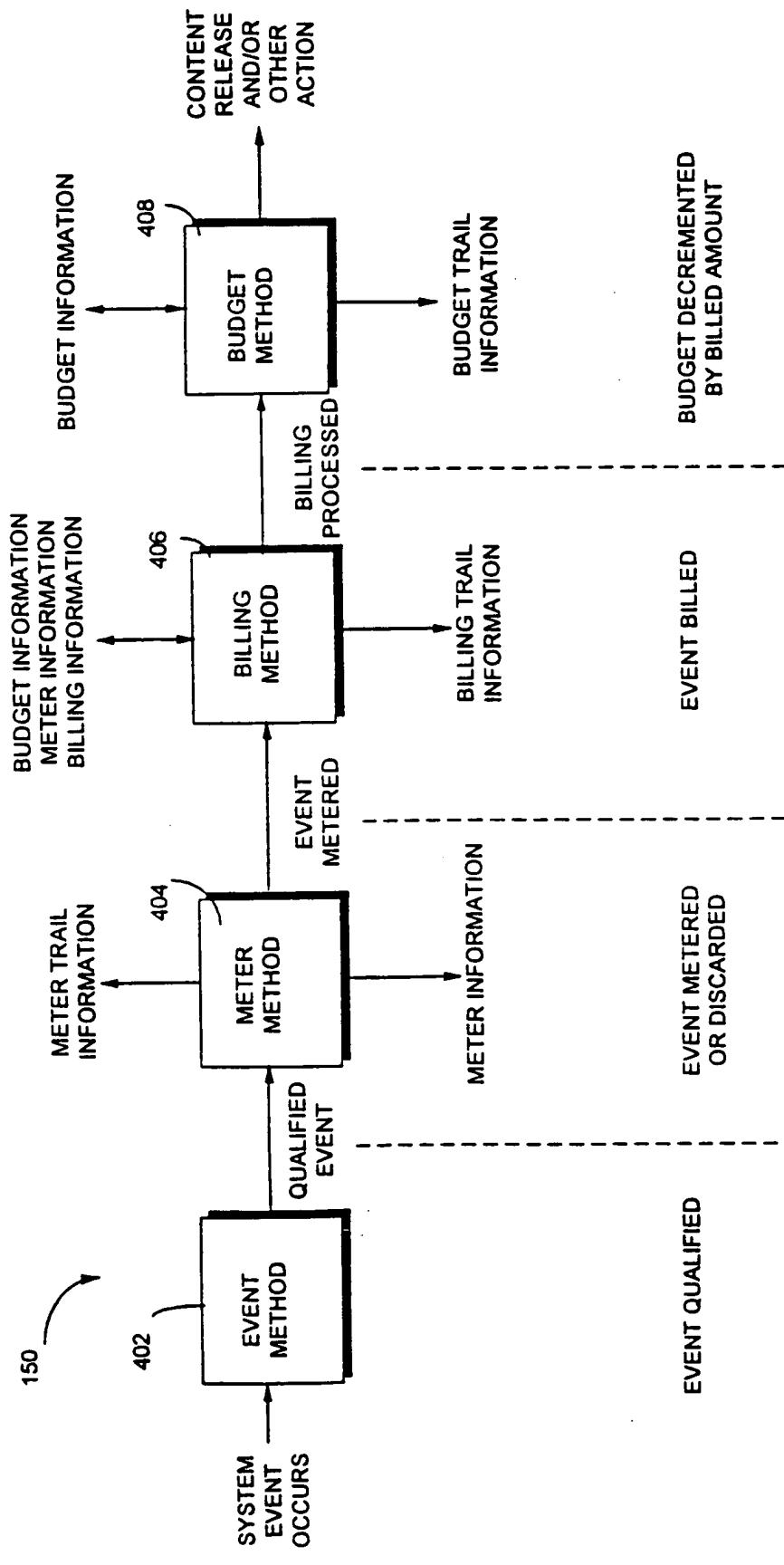
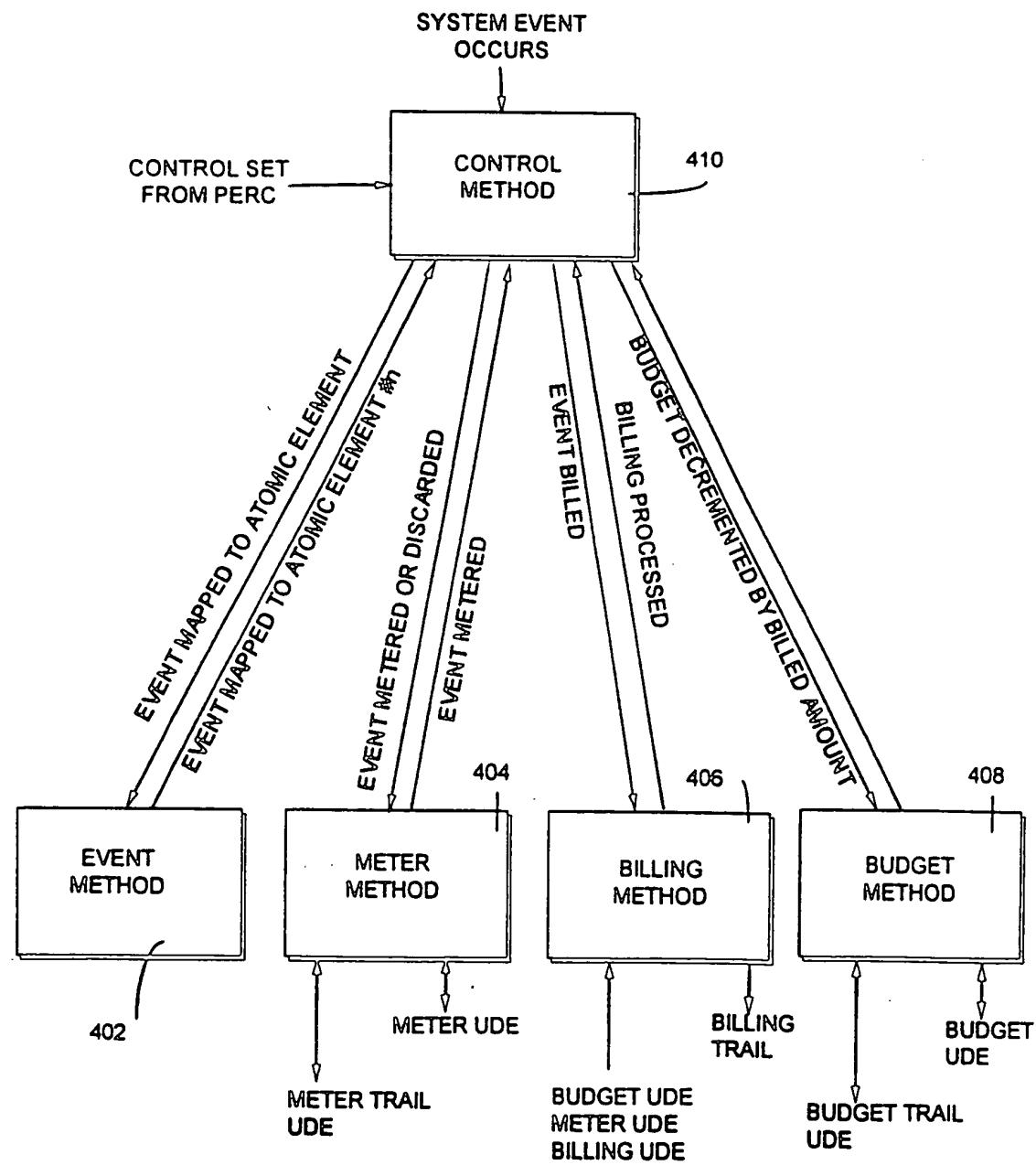
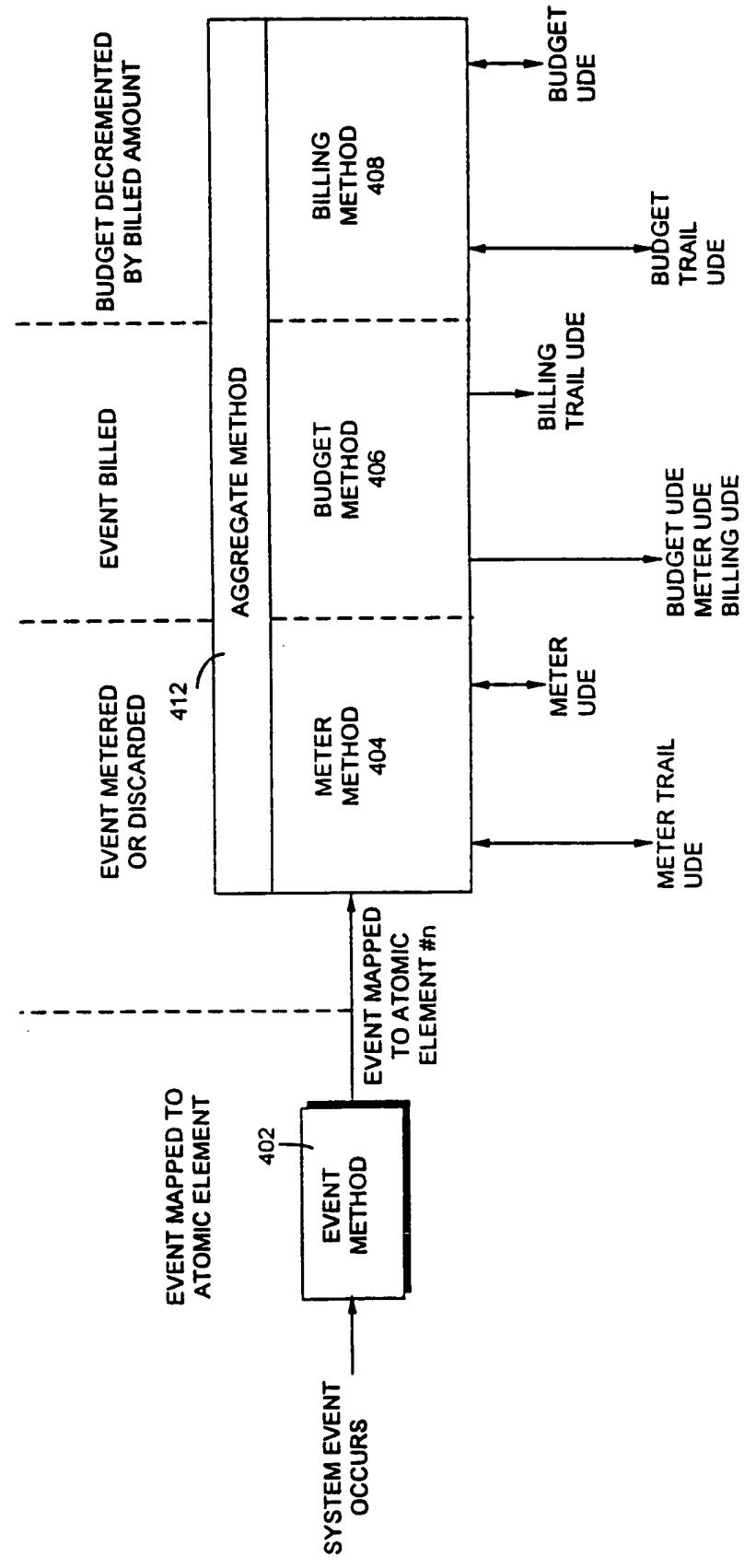
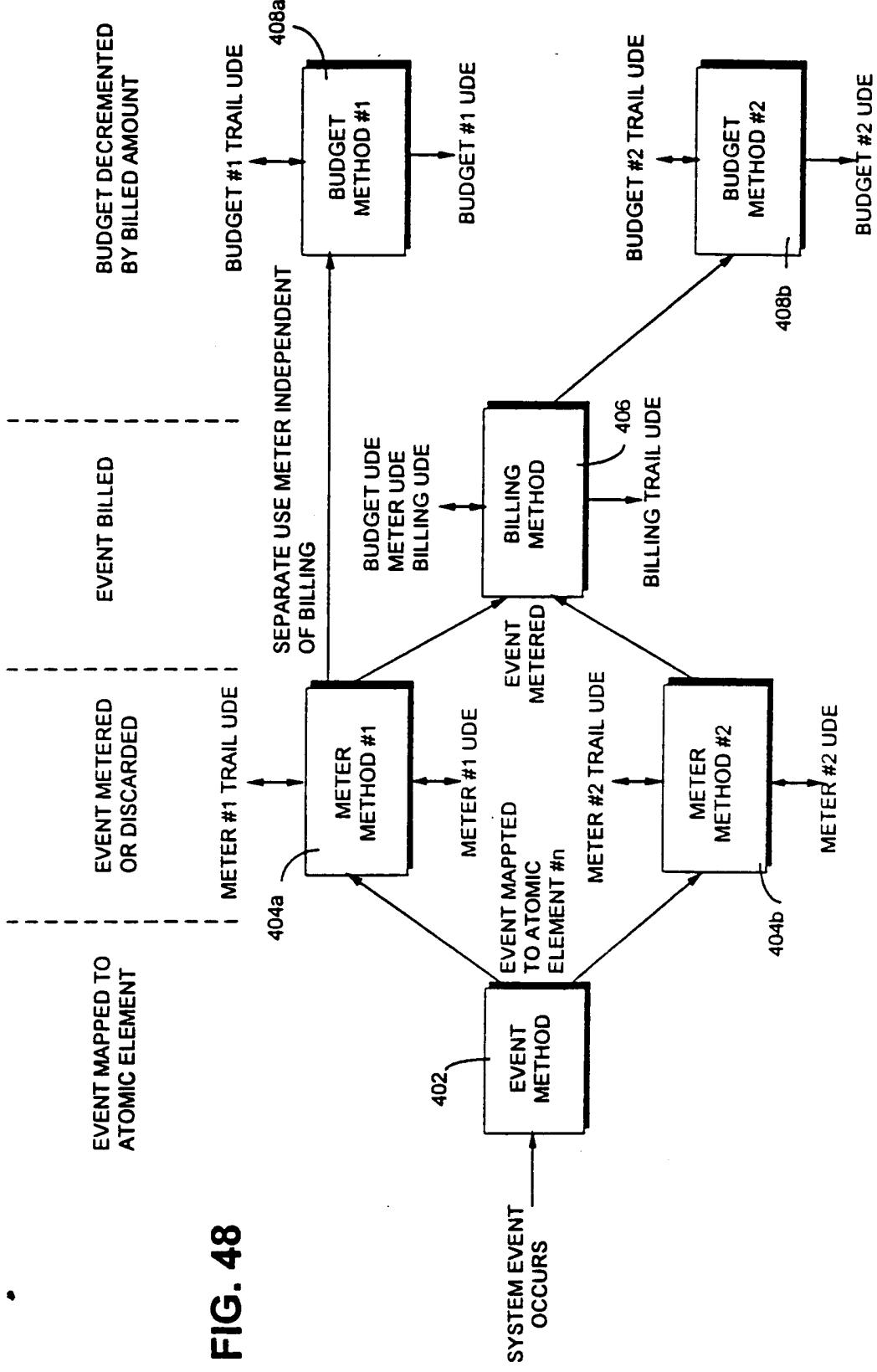


FIG. 46



**FIG. 47**





# OPEN Method Use Process Flow

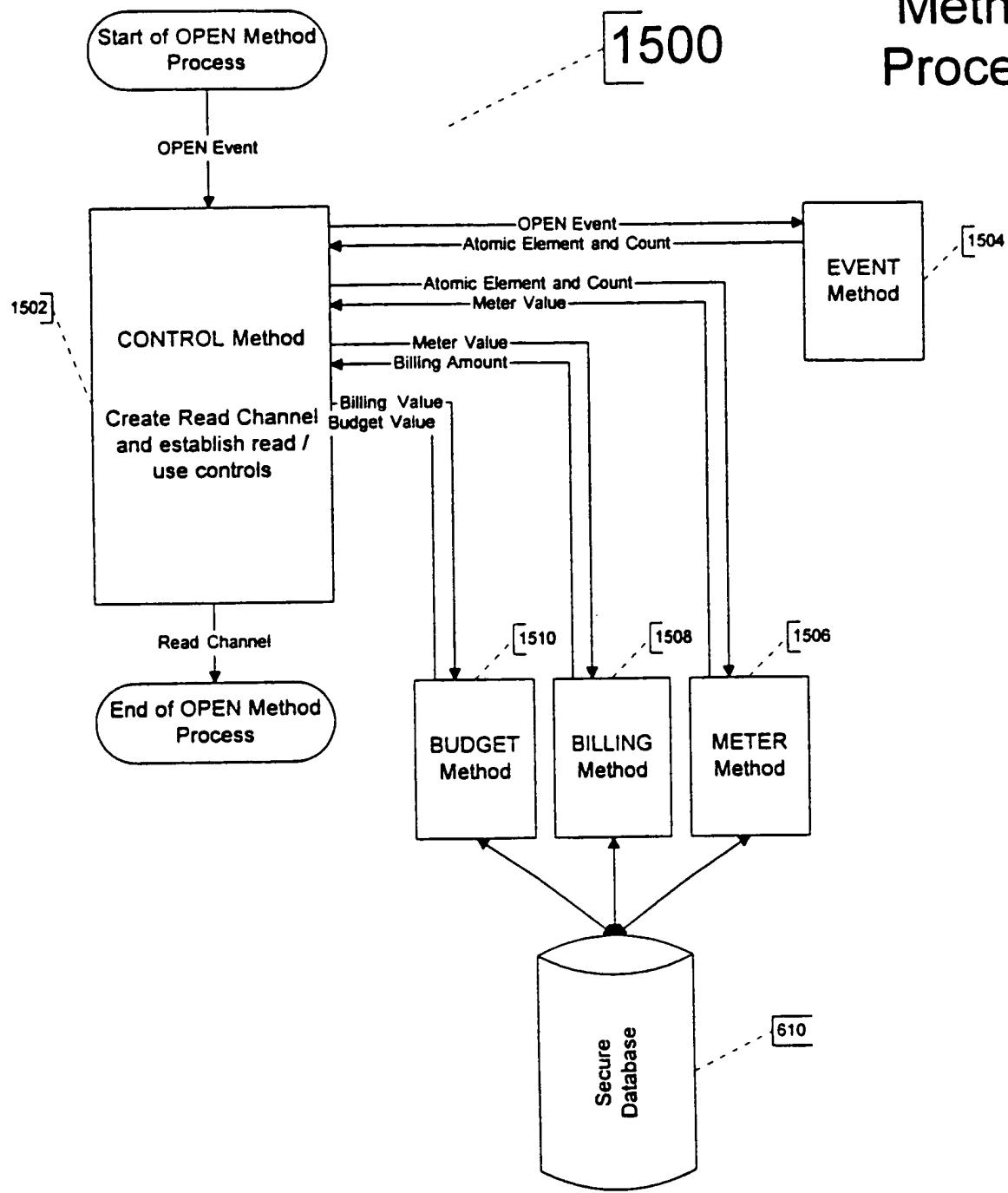


Figure 49

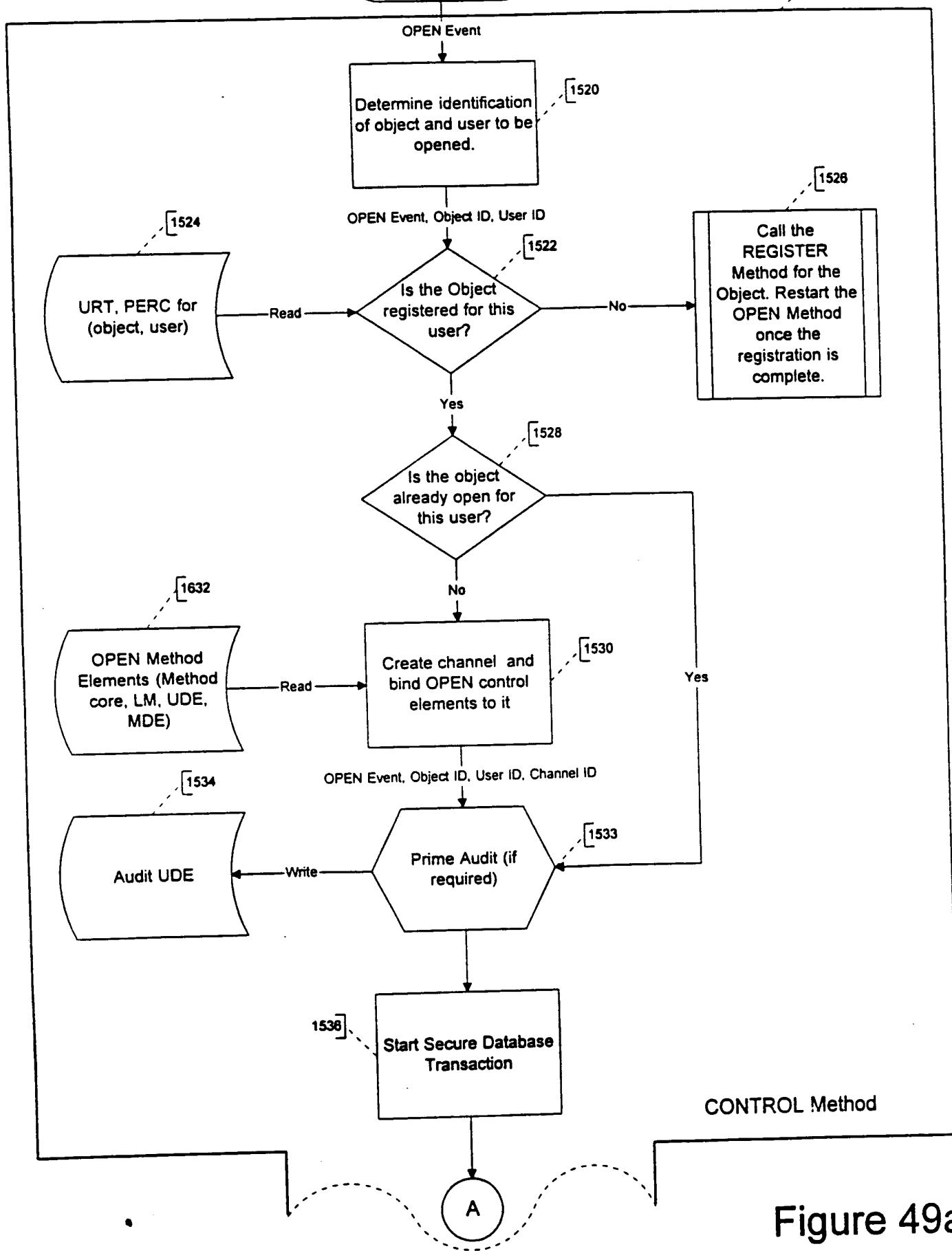
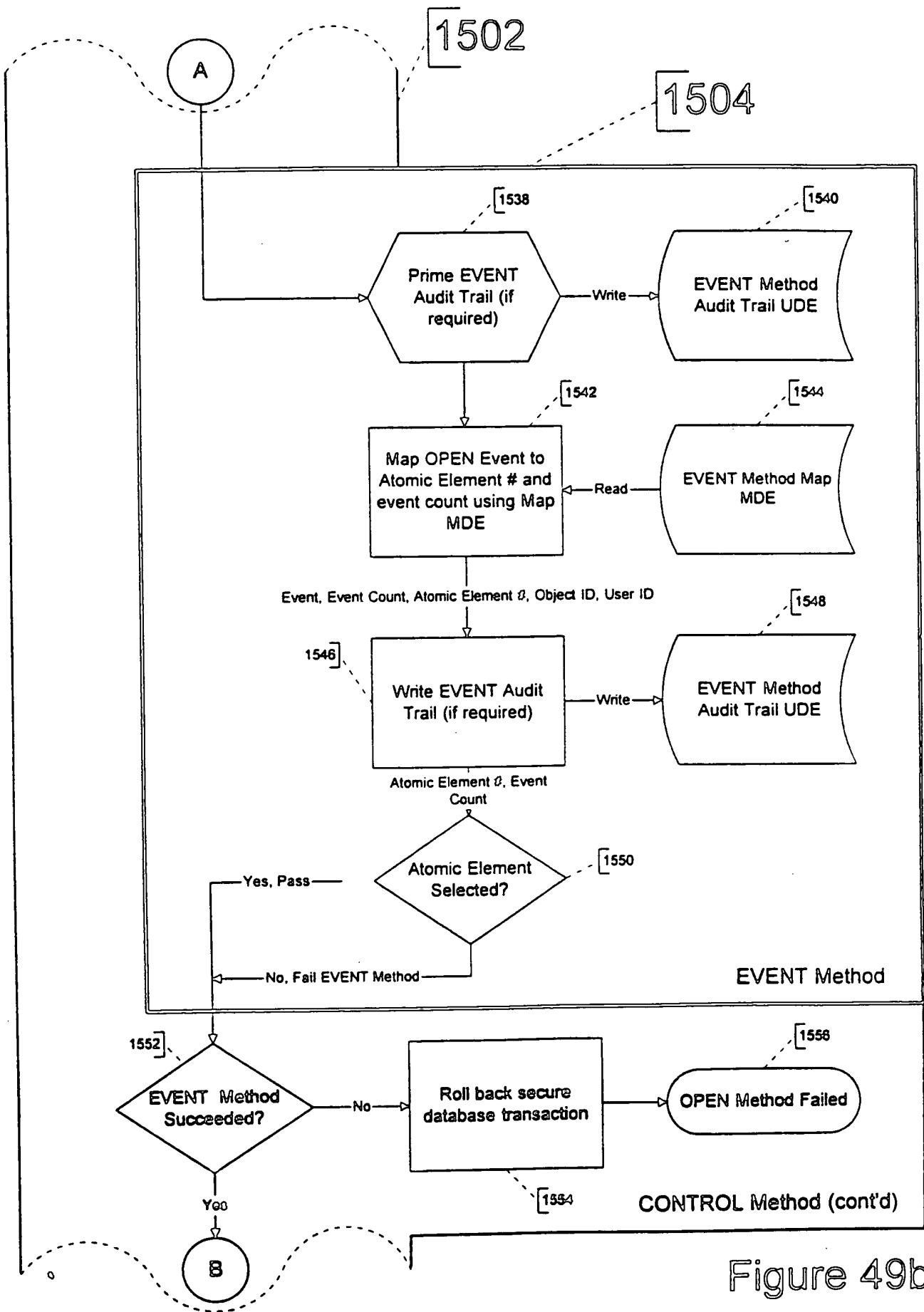


Figure 49a



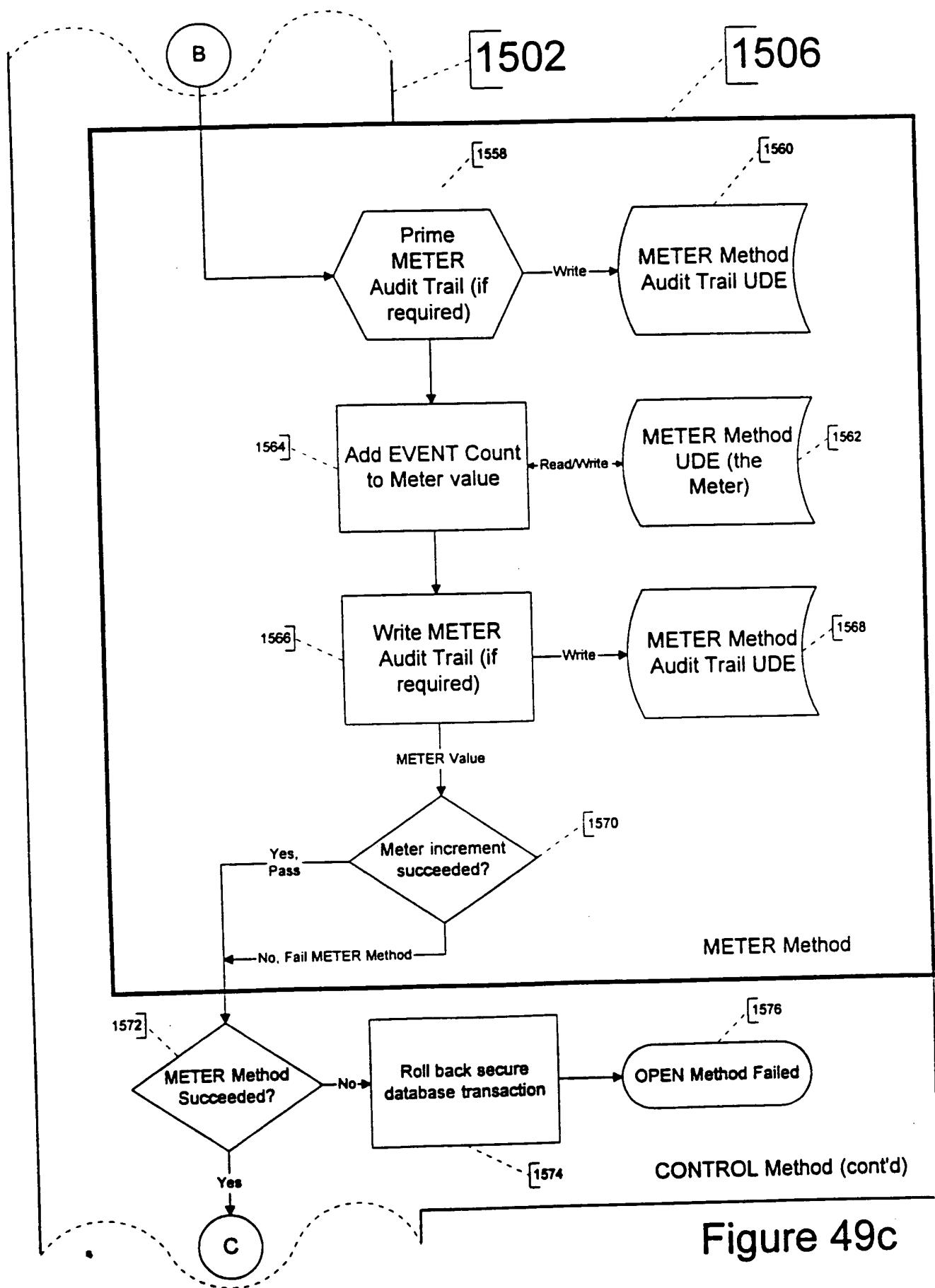


Figure 49c

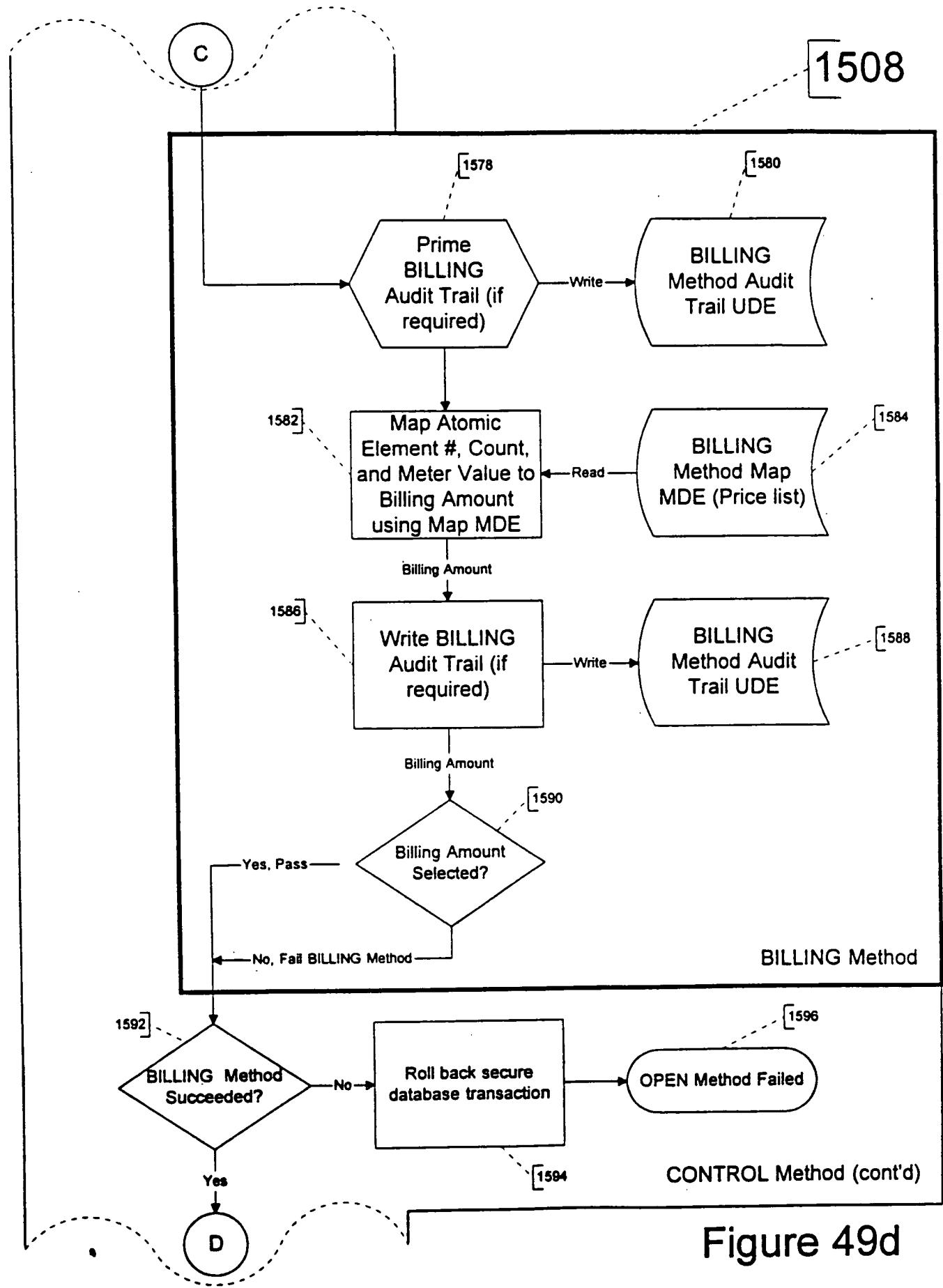


Figure 49d

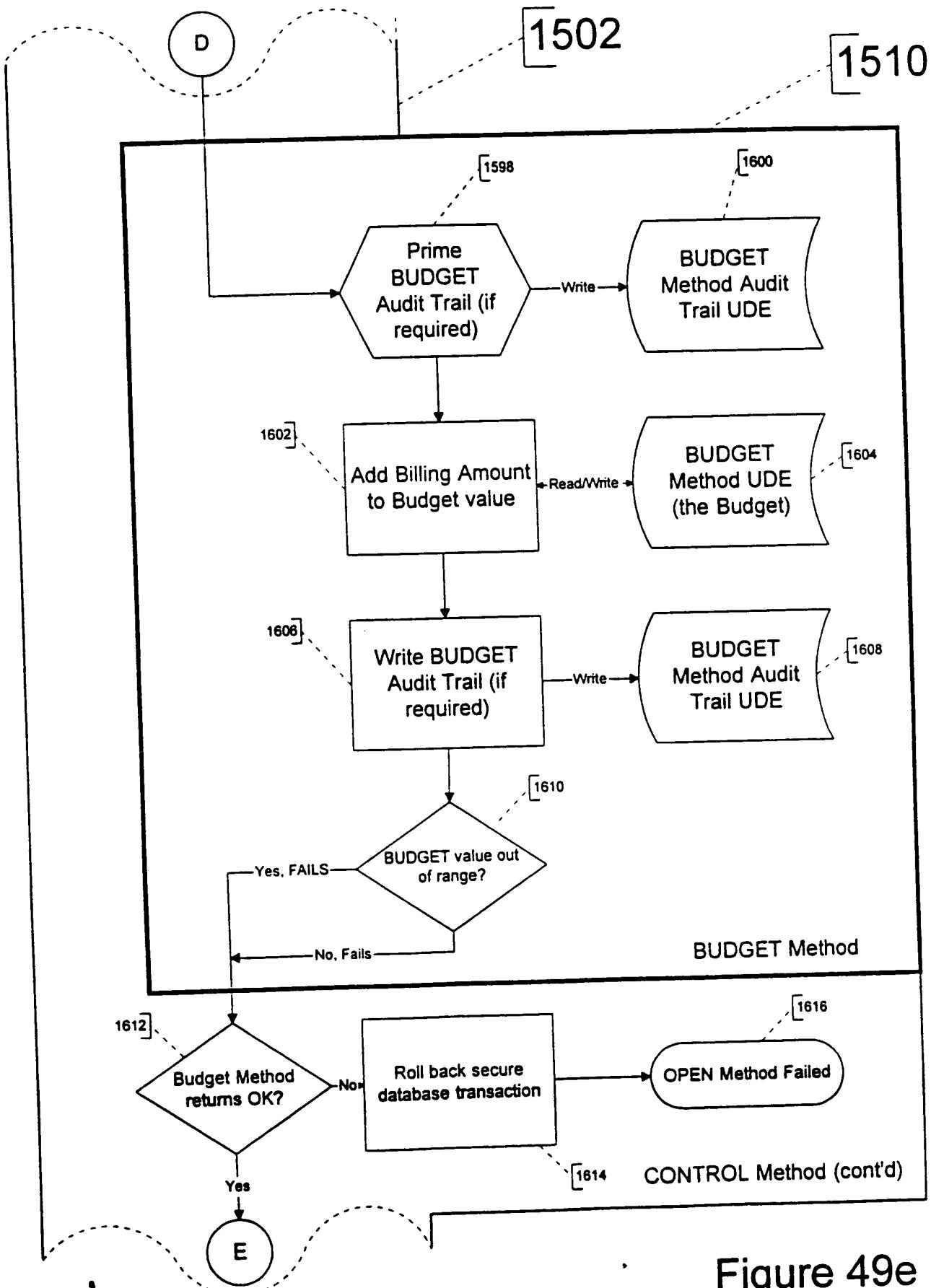


Figure 49e

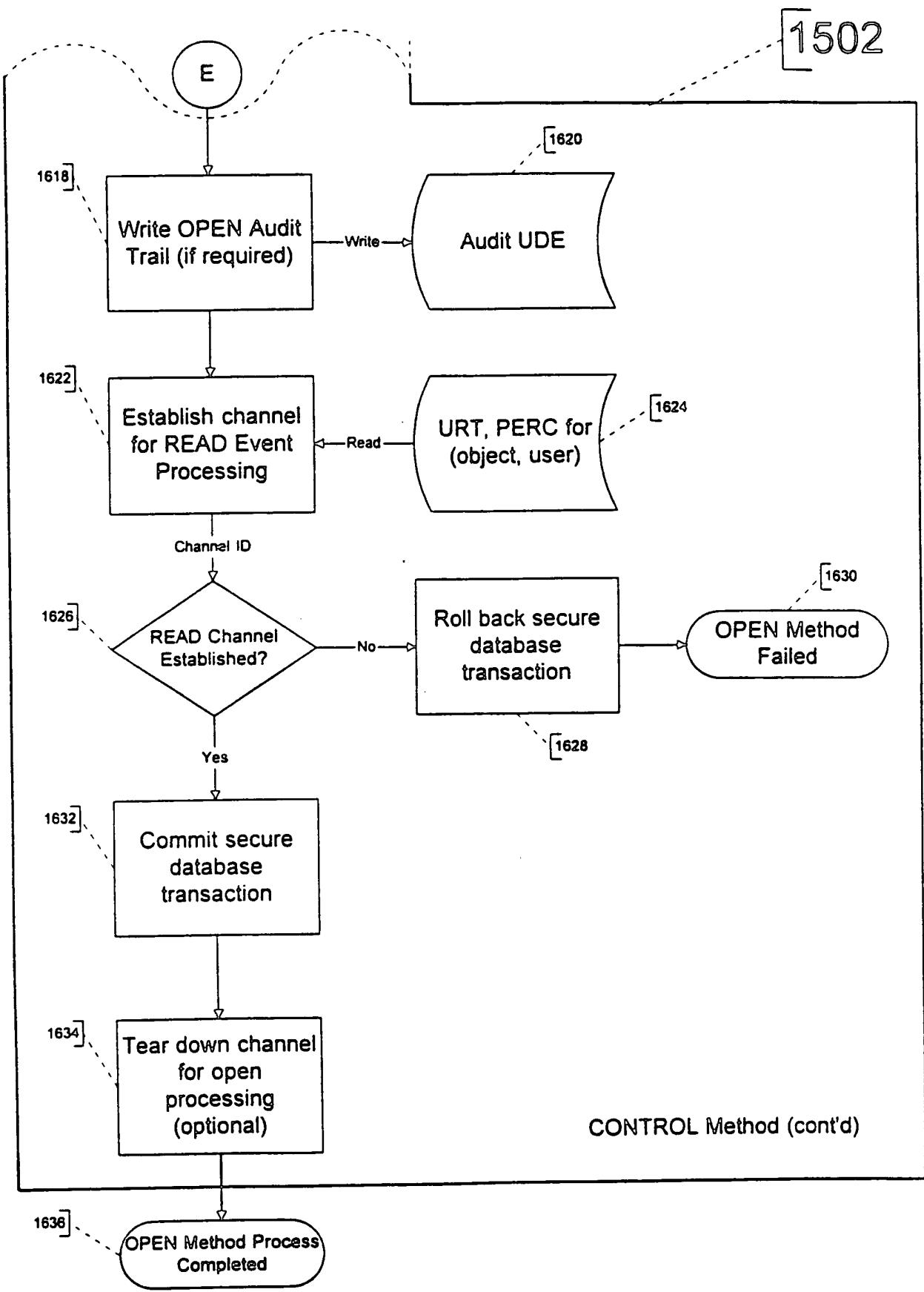


Figure 49f

# READ Method Use Process Flow

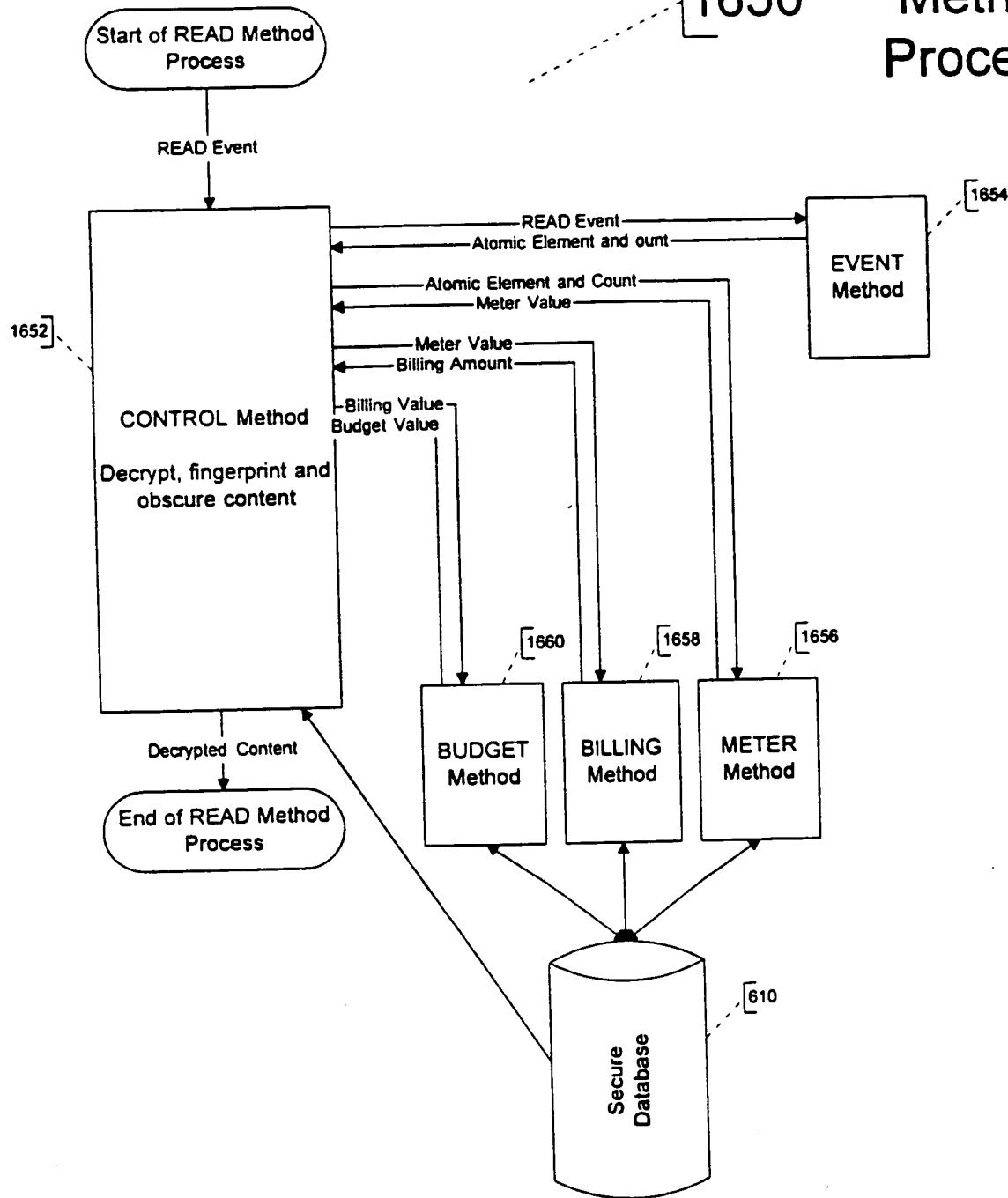


Figure 50

1650

1652

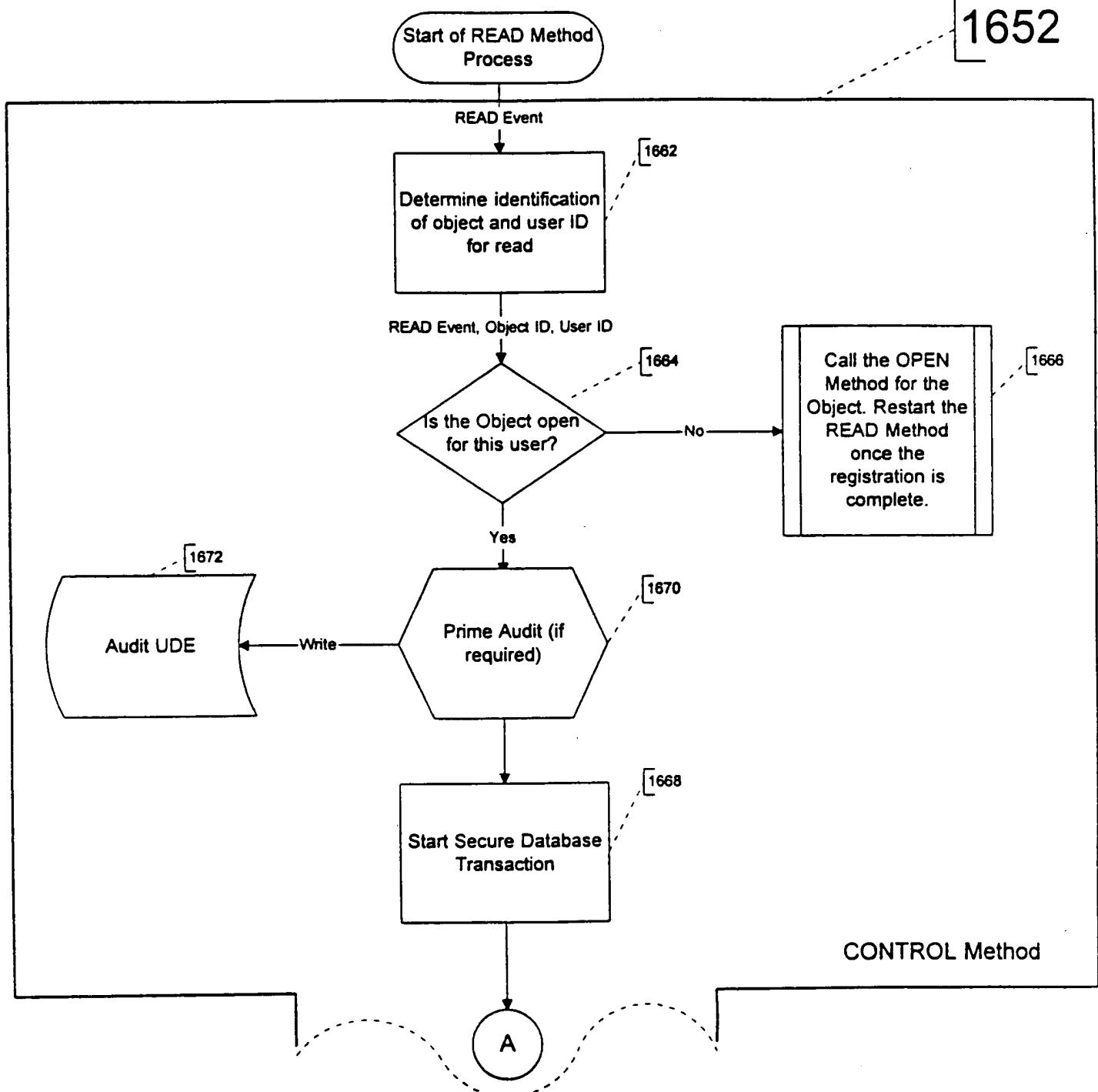


Figure 50a

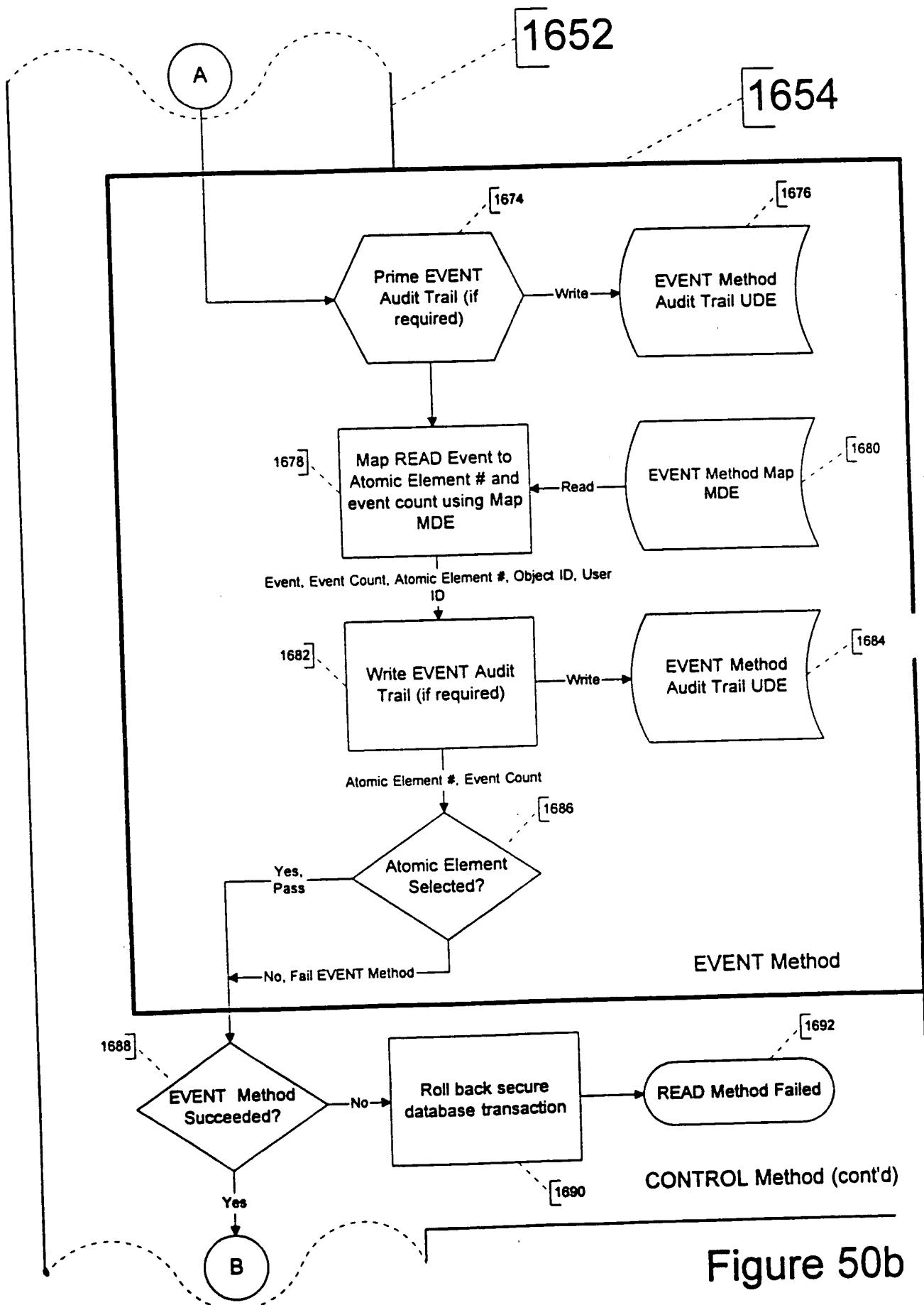


Figure 50b

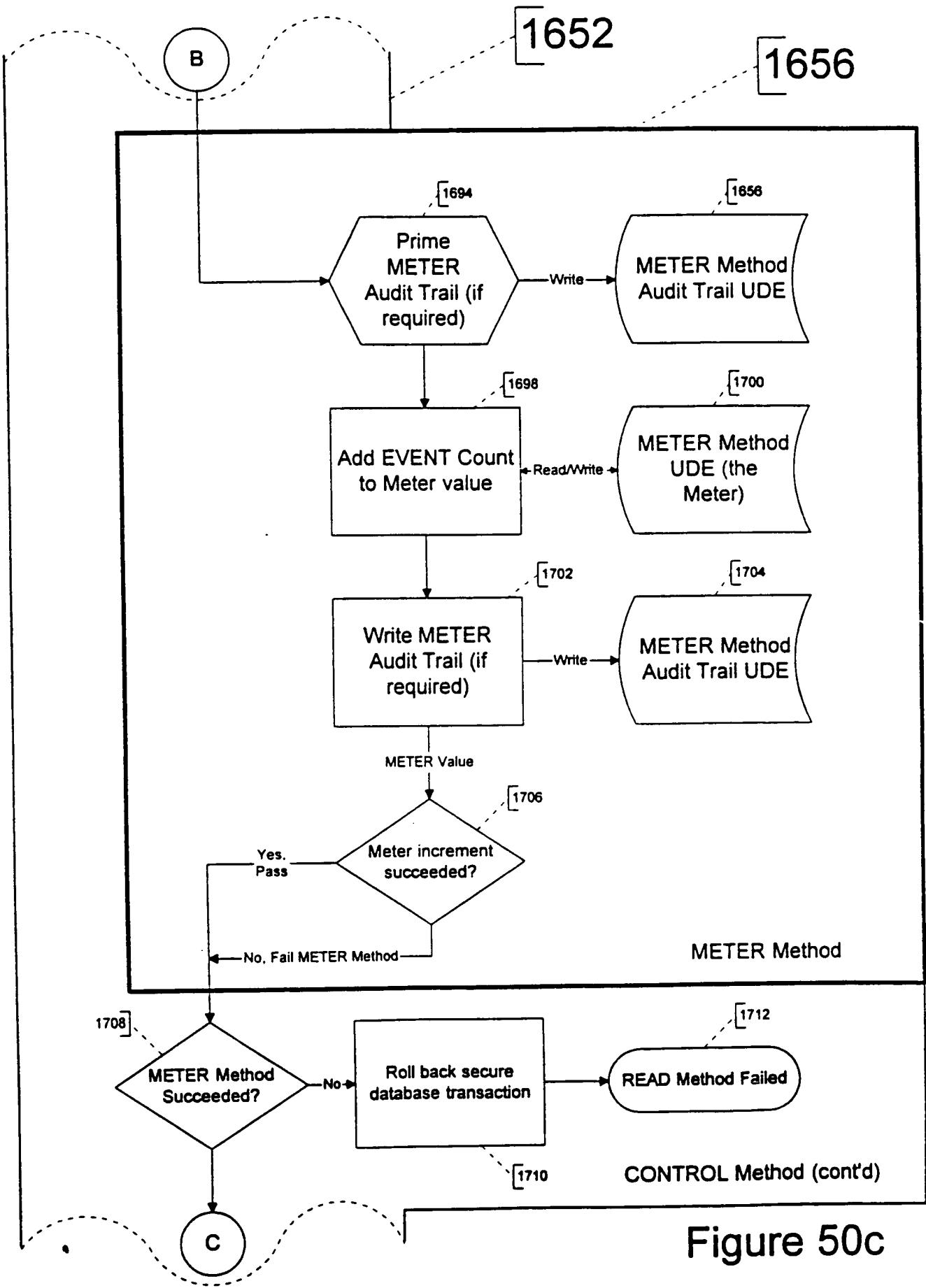


Figure 50c

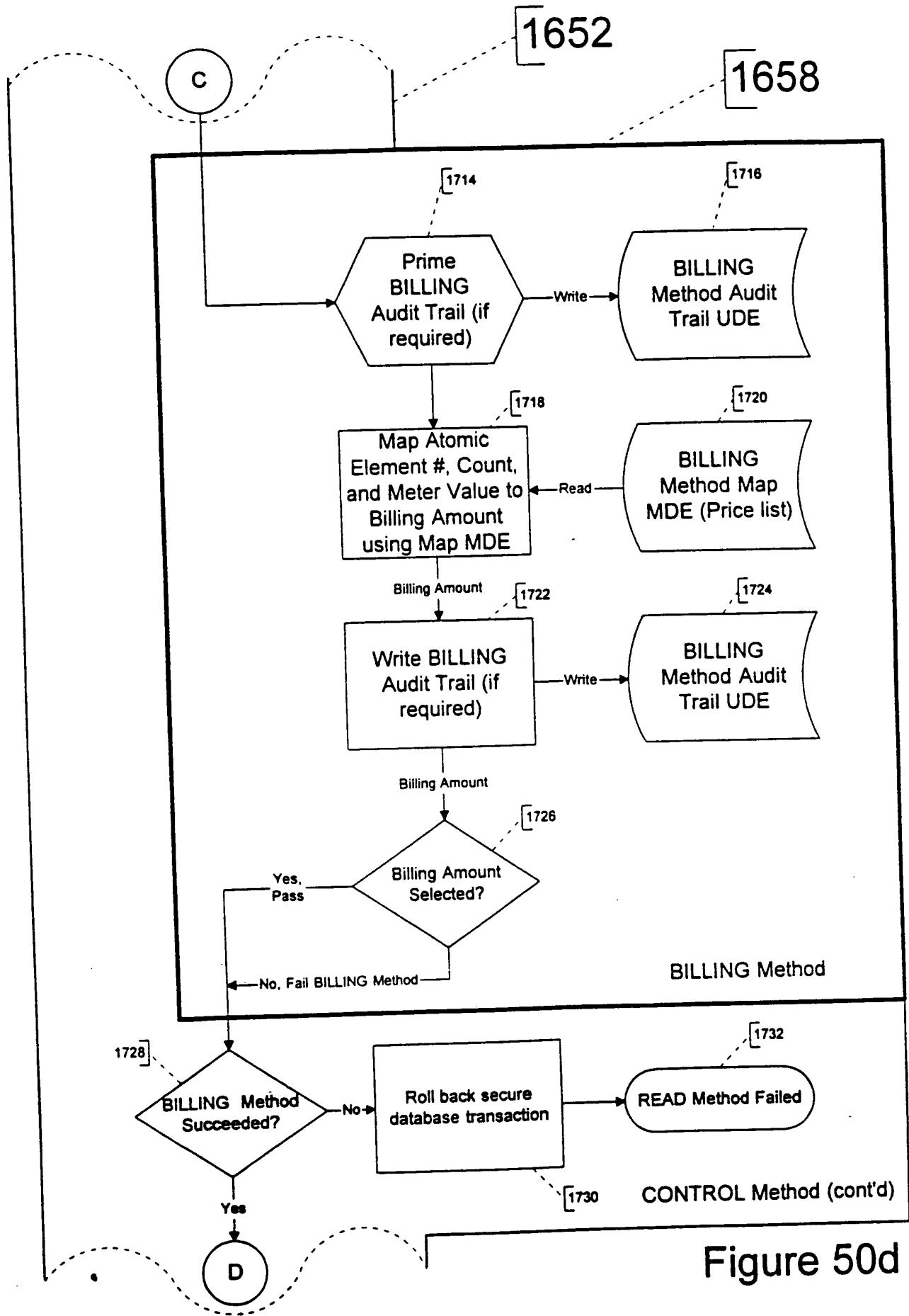


Figure 50d

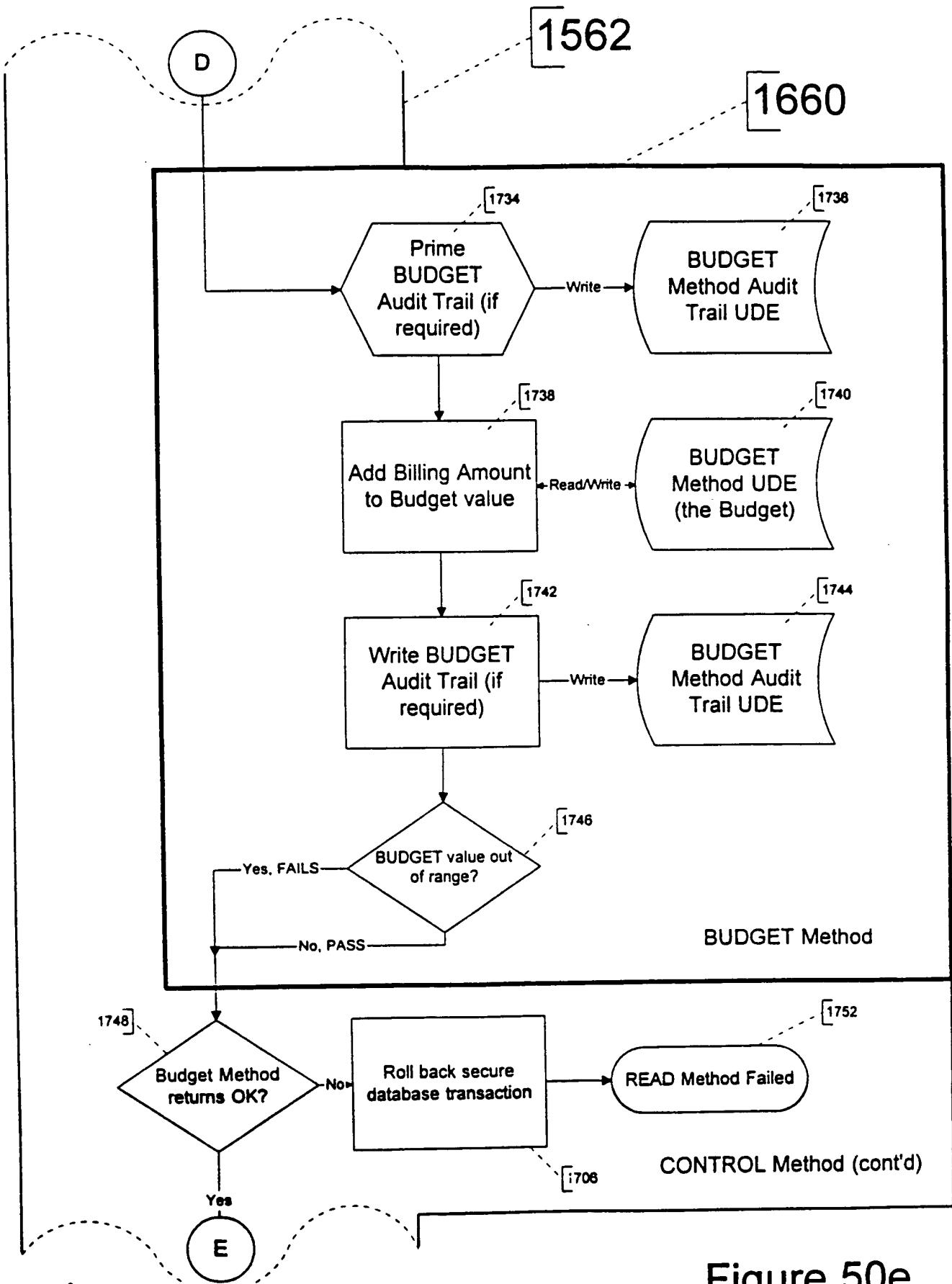
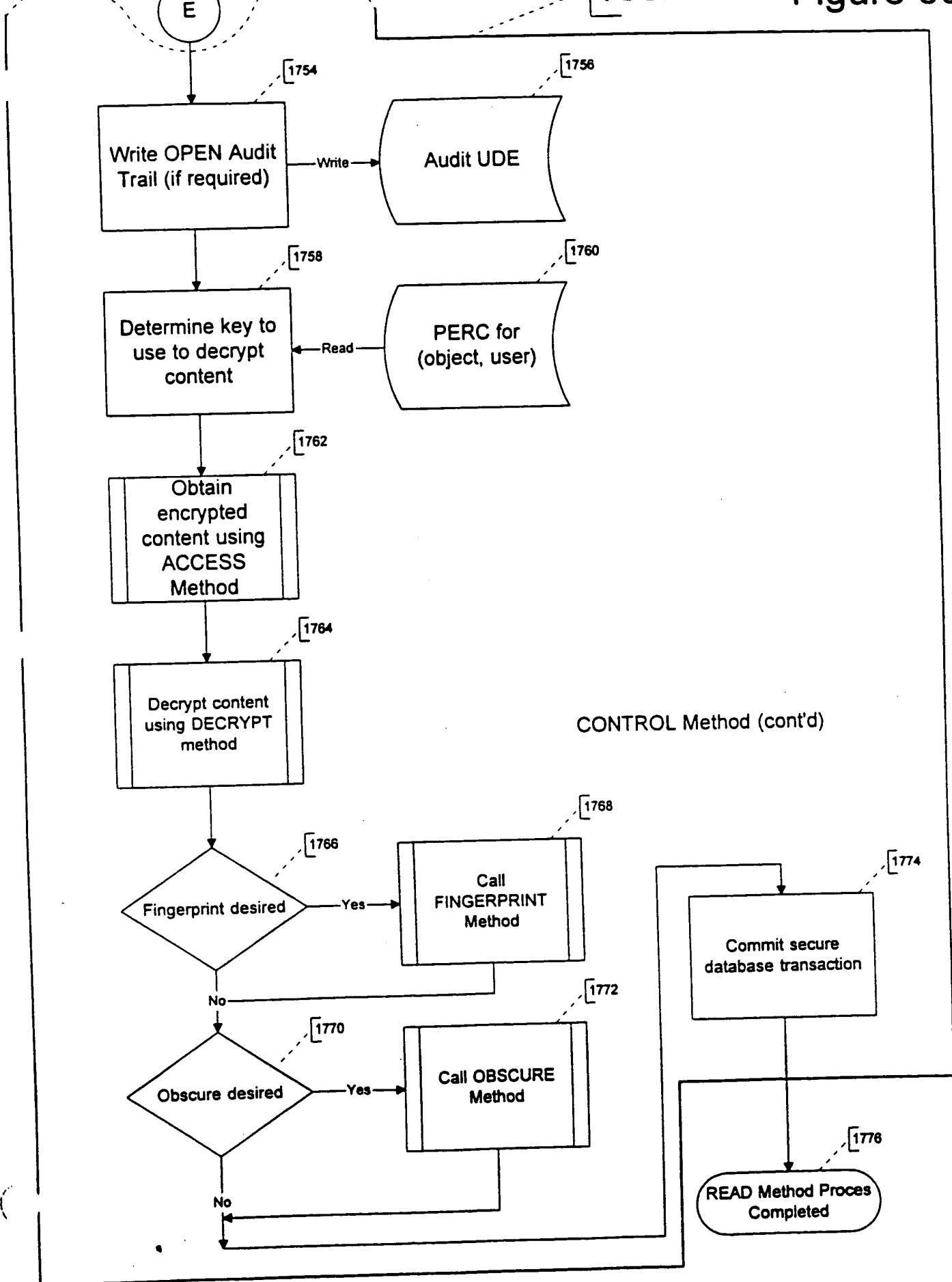


Figure 50e



# WRITE Method Use Process Flow

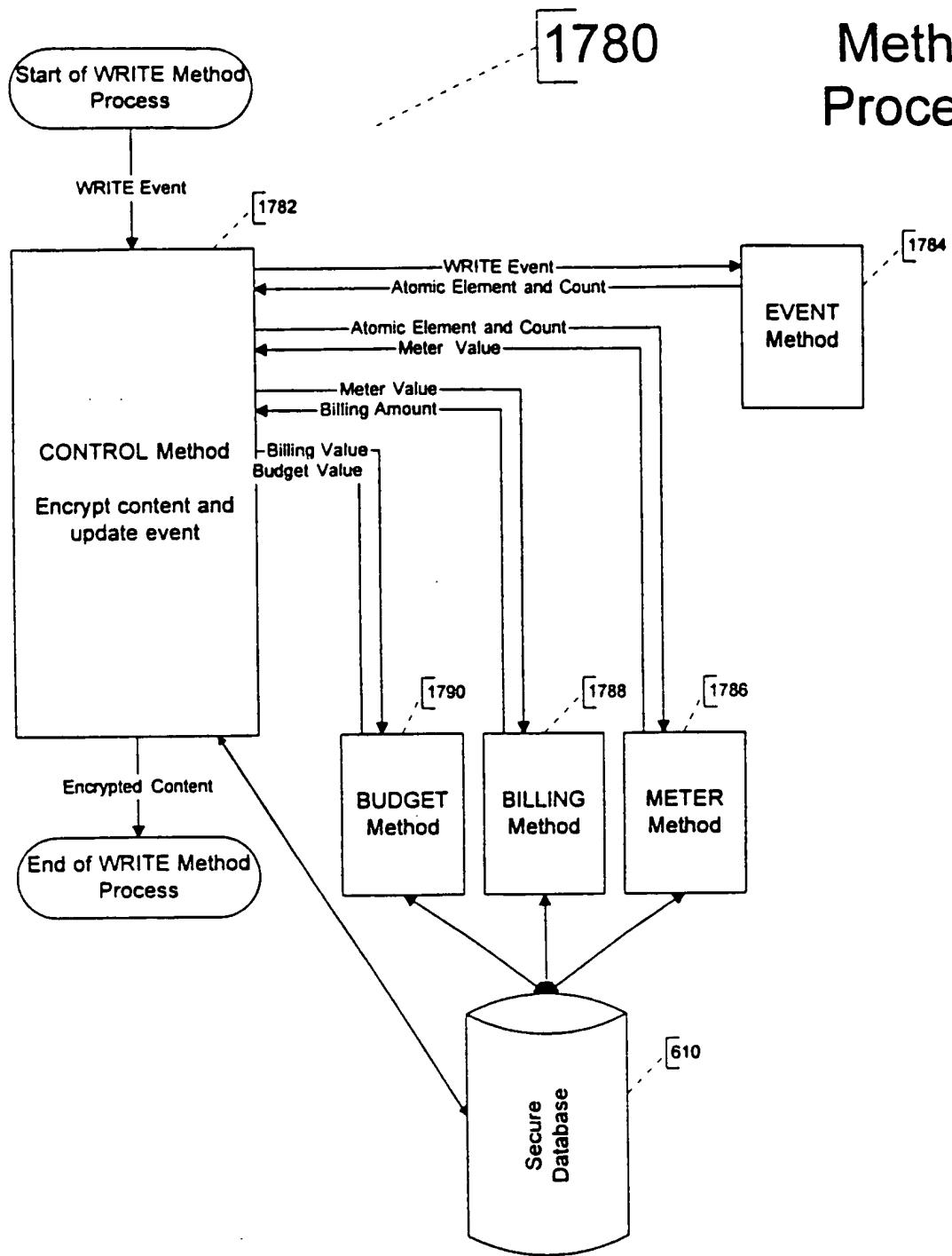


Figure 51

1780

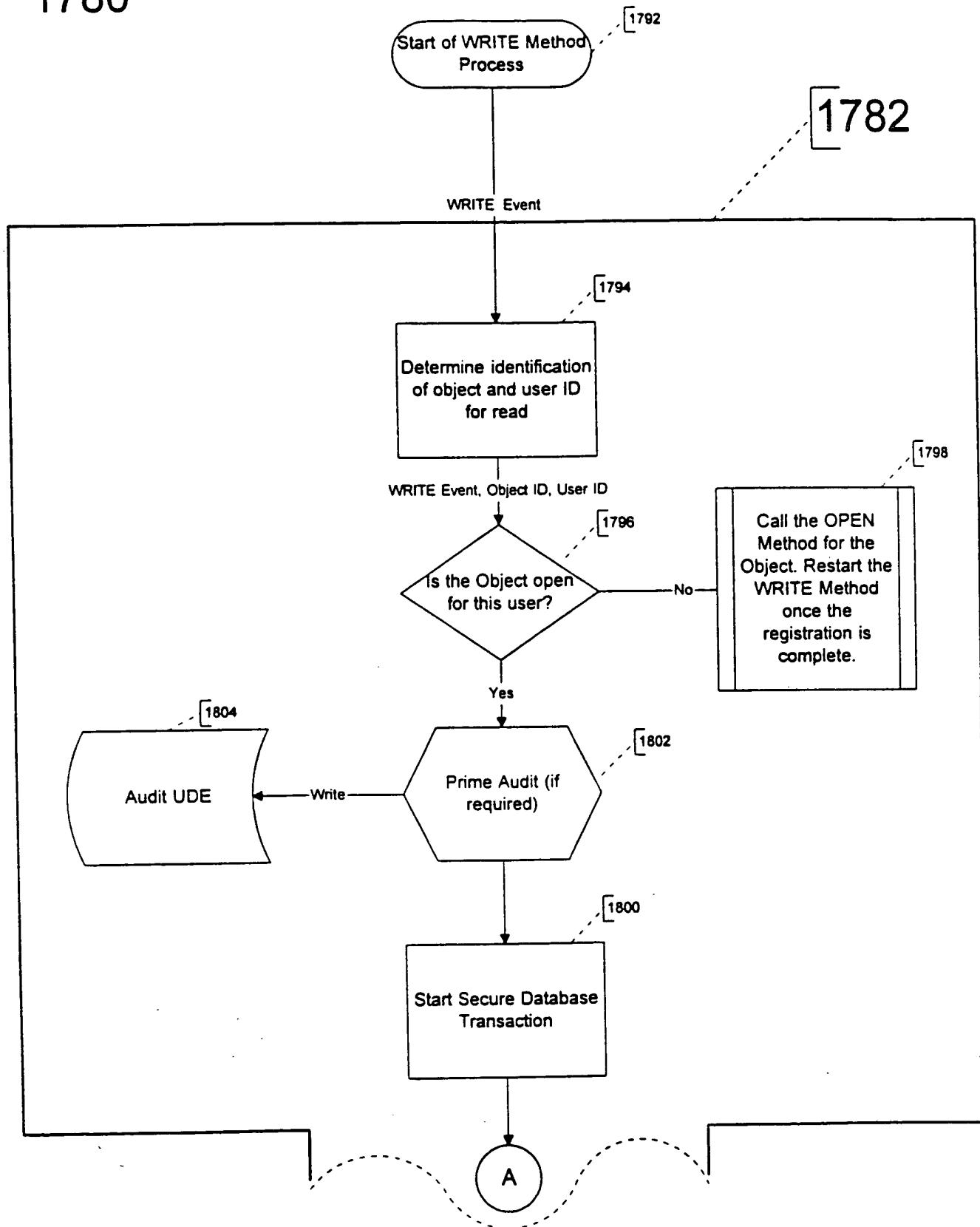


Figure 51a

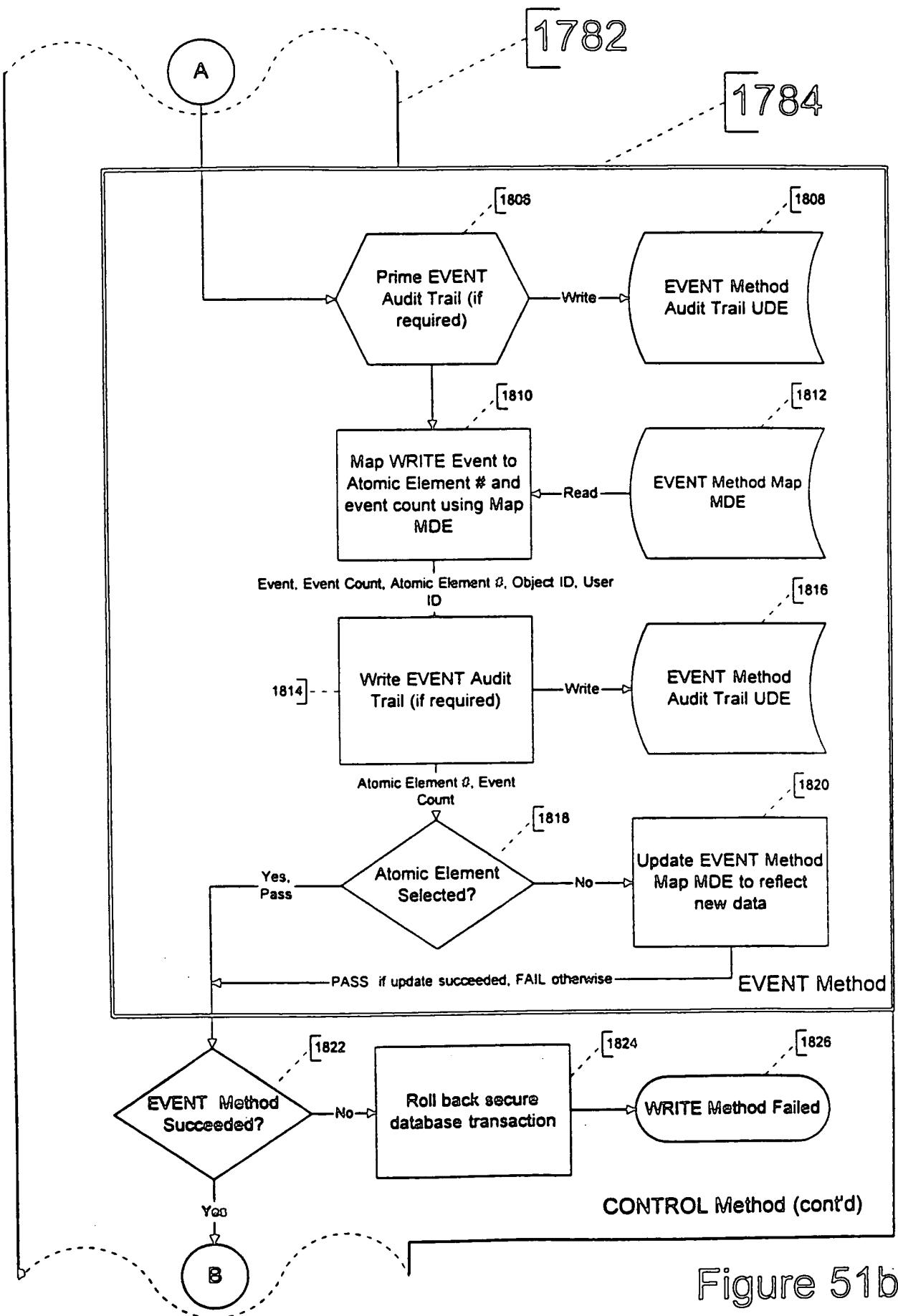
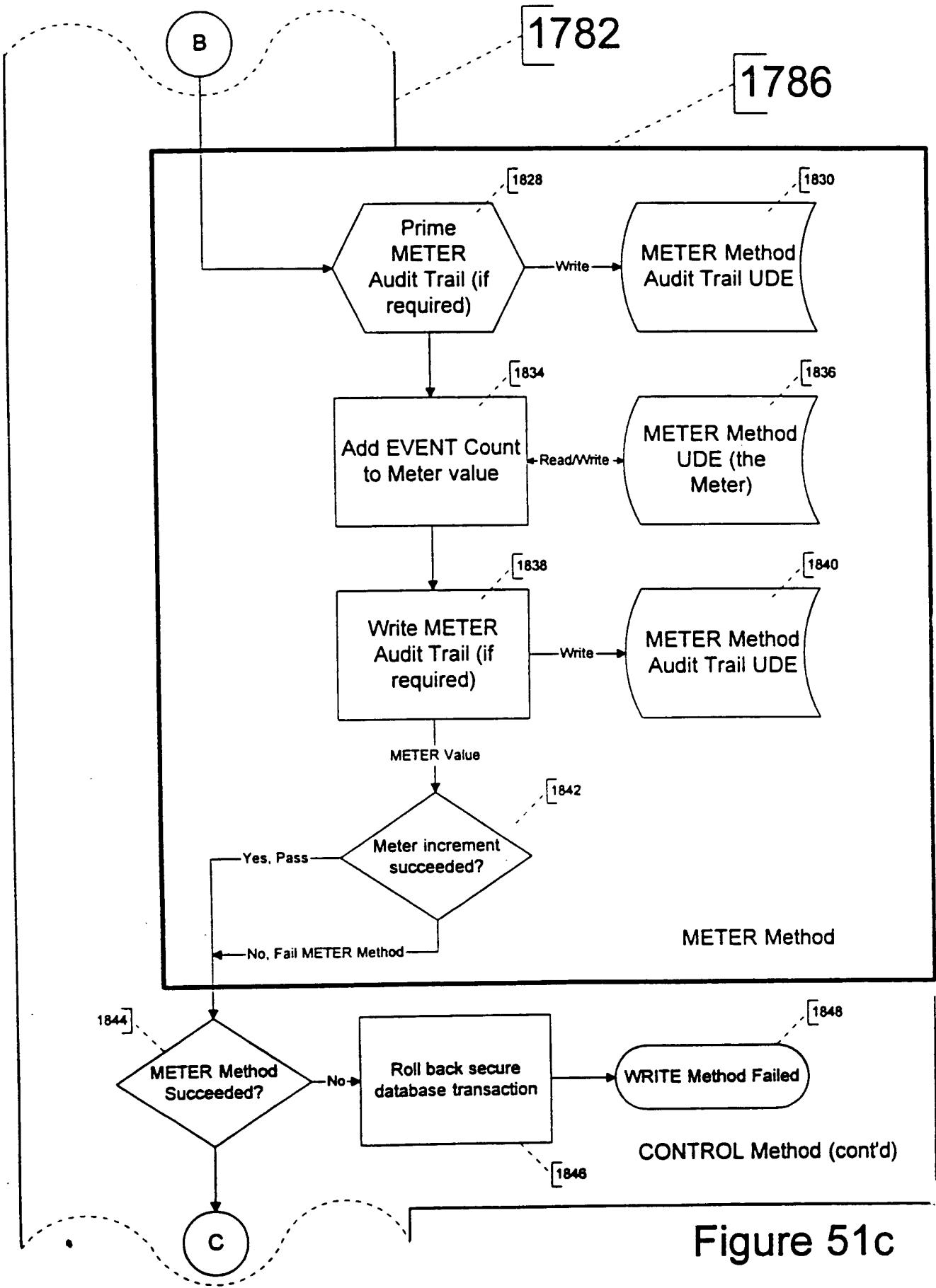


Figure 51b



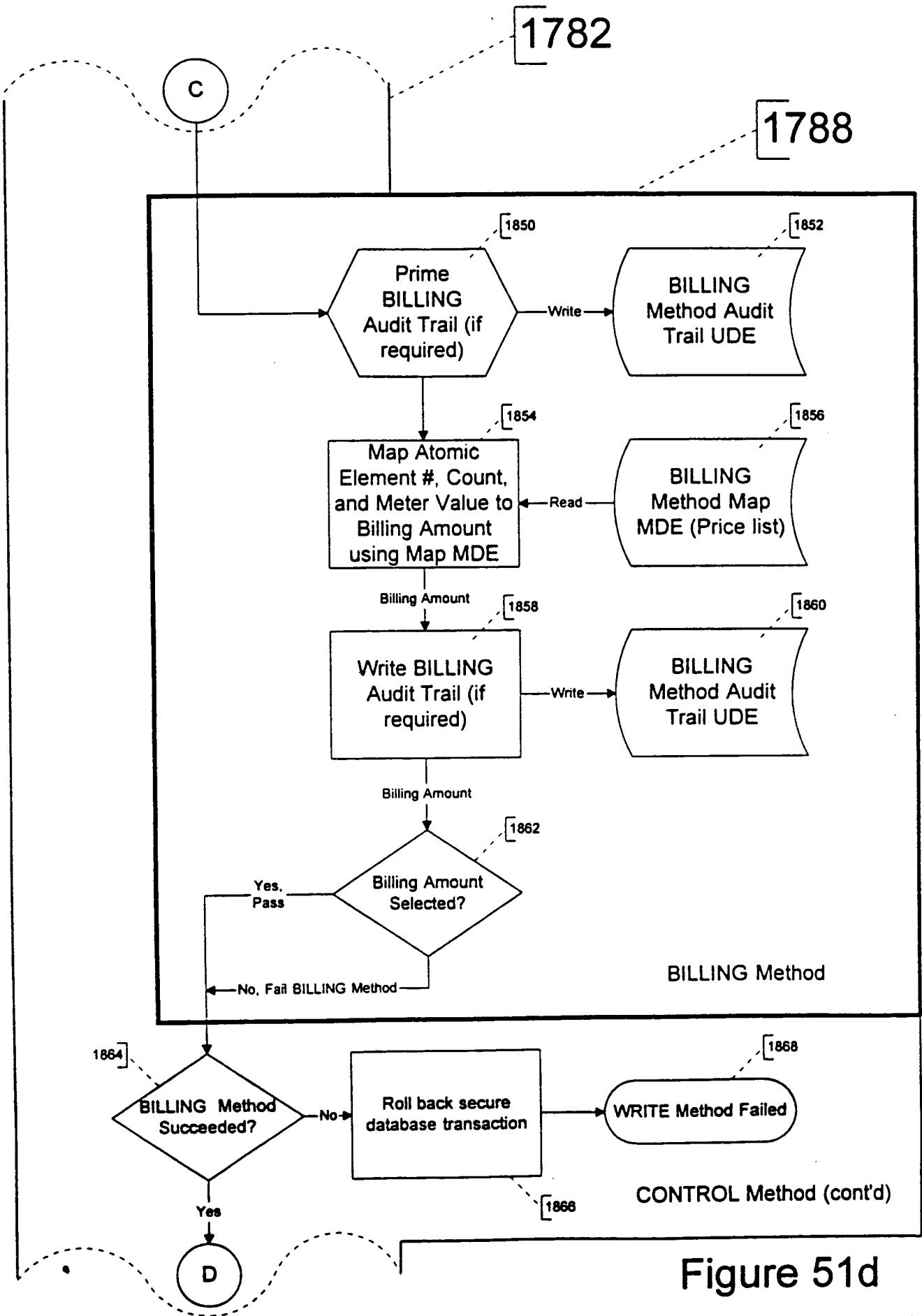


Figure 51d

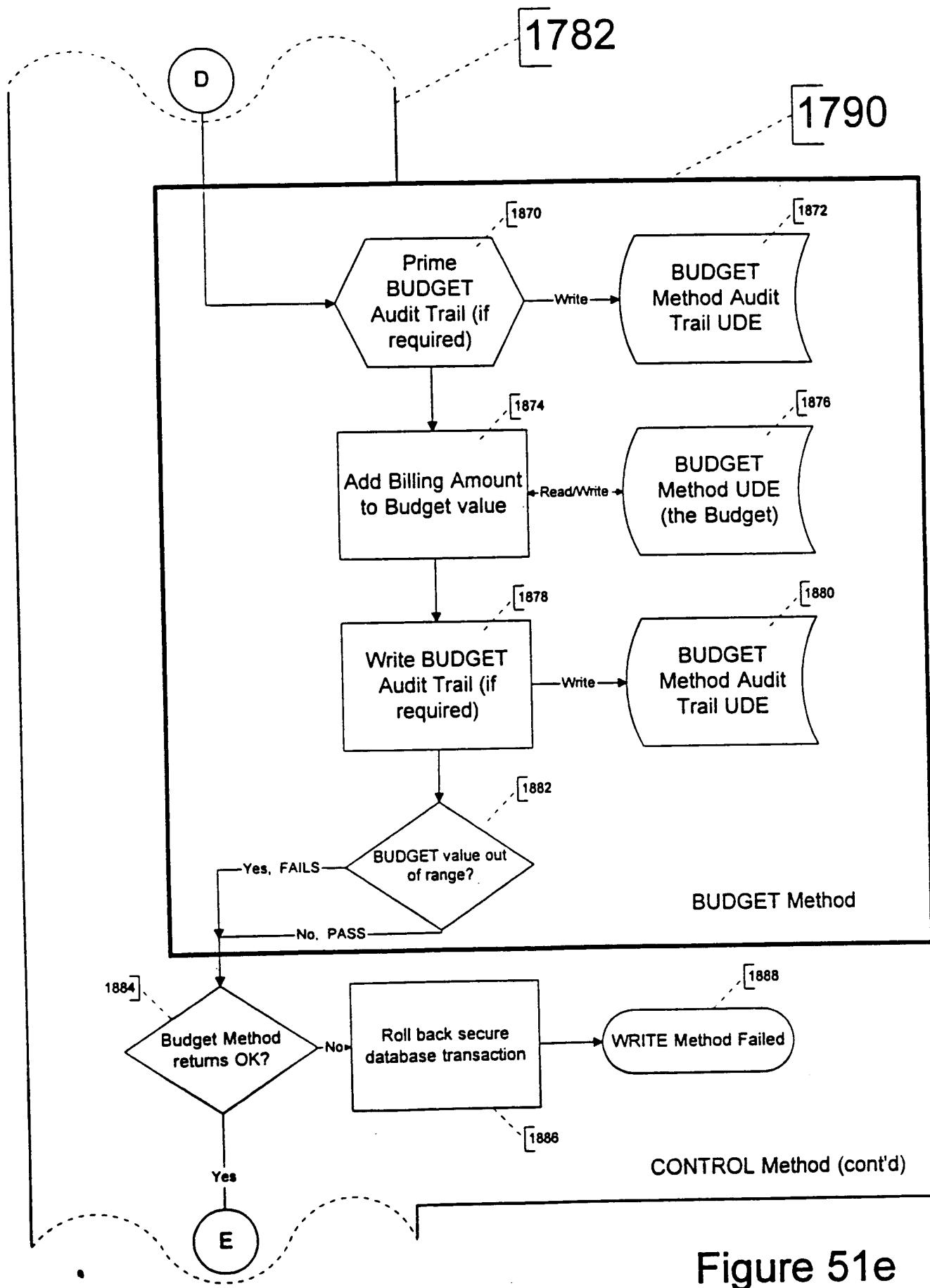


Figure 51e

# CLOSE Method Process Flow

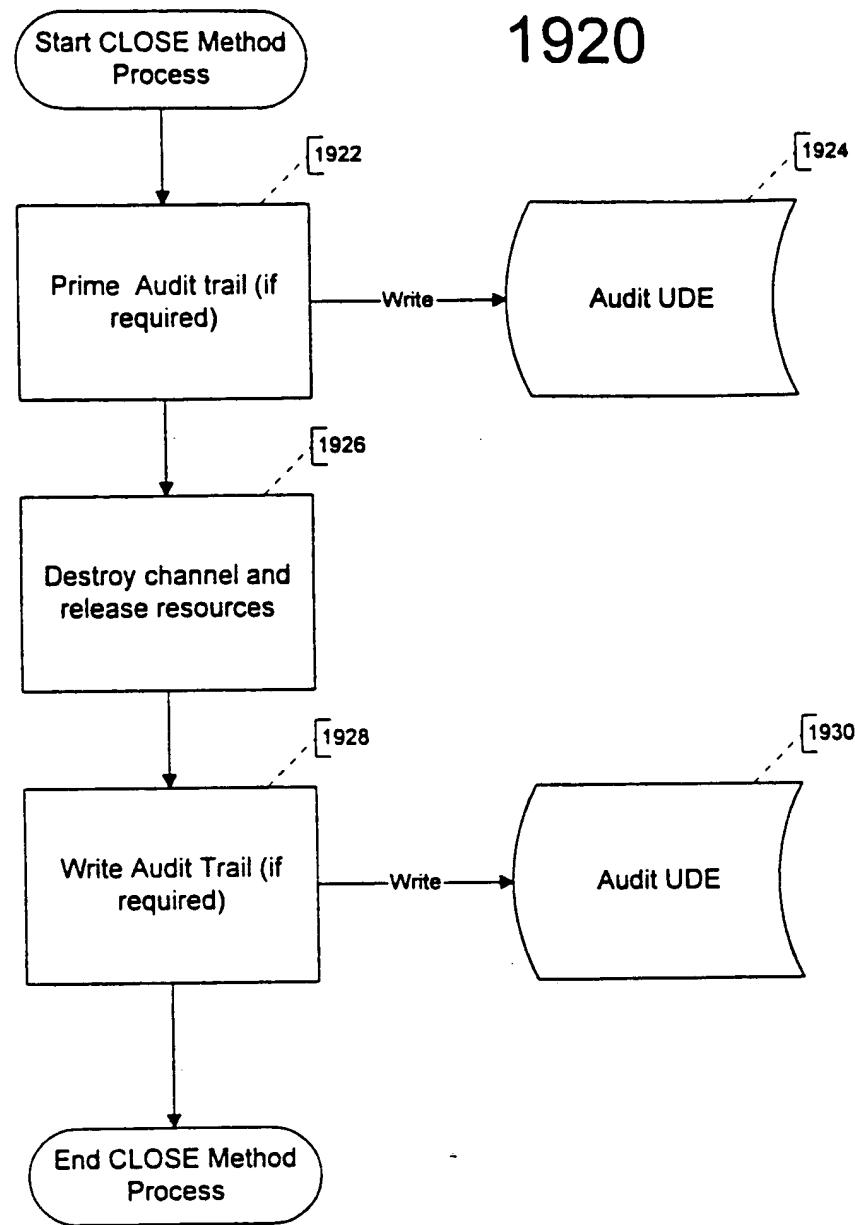


Figure 52

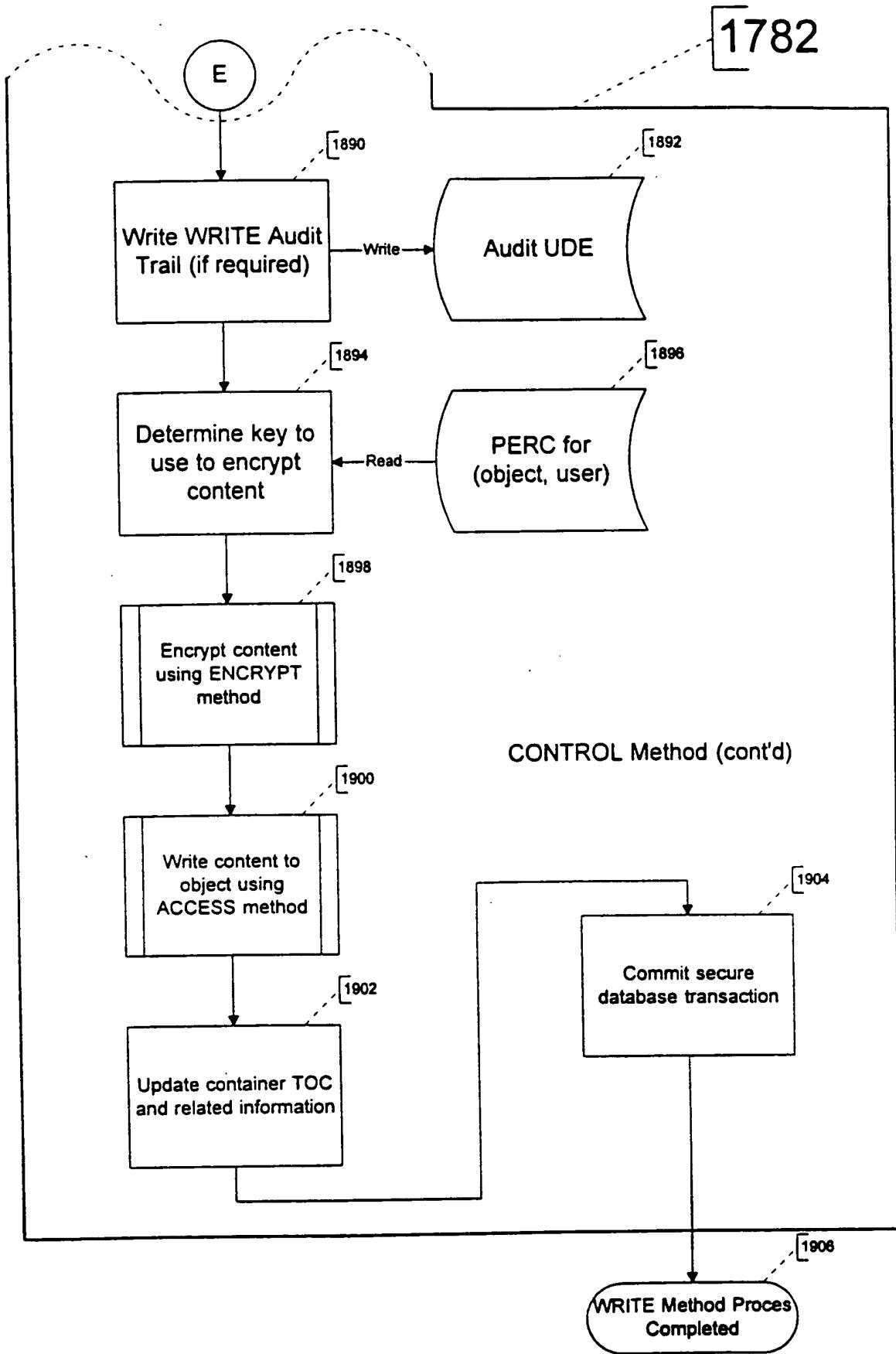


Figure 51f

# Sample EVENT Method Mapping Process

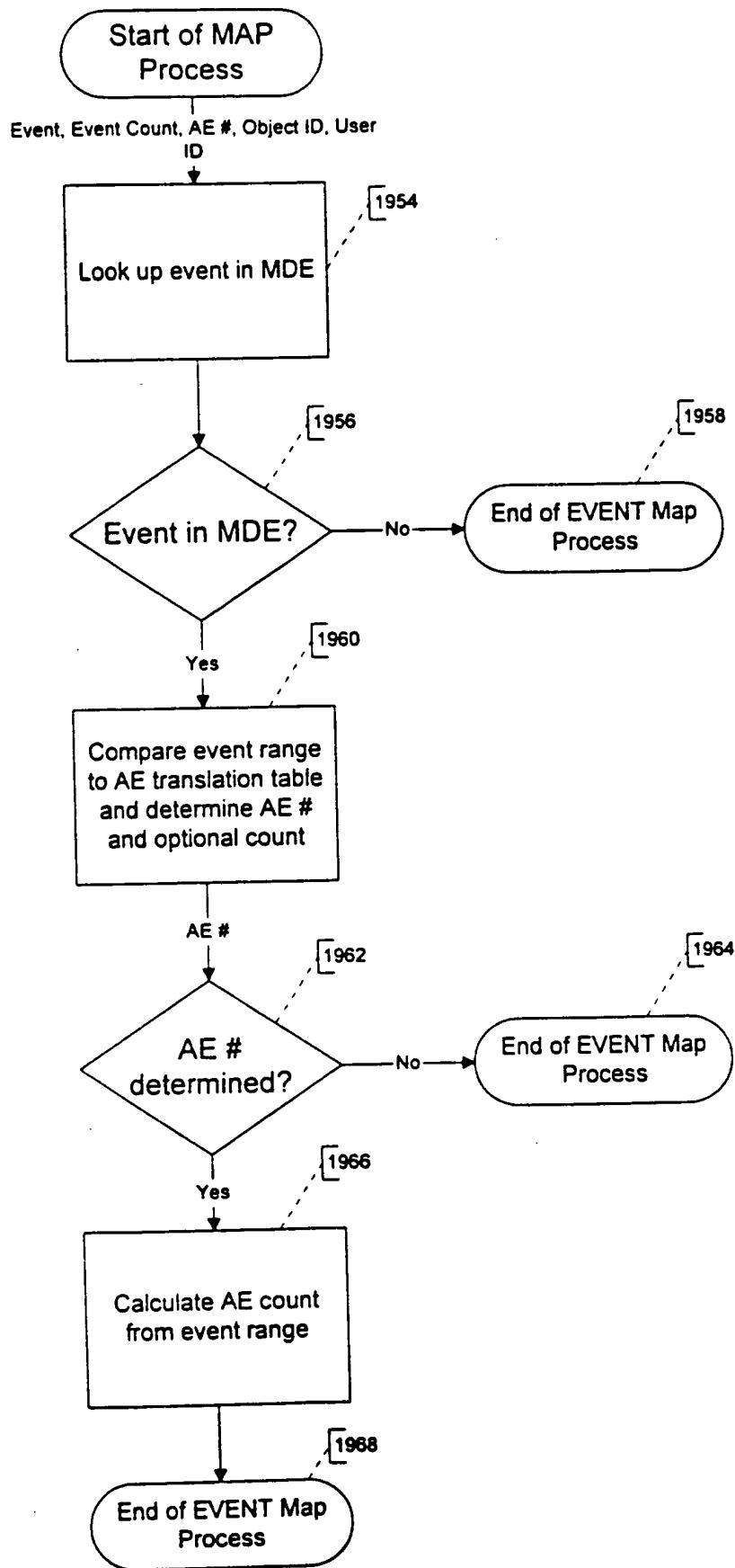


Figure 53b

# EVENT Method Process Flows

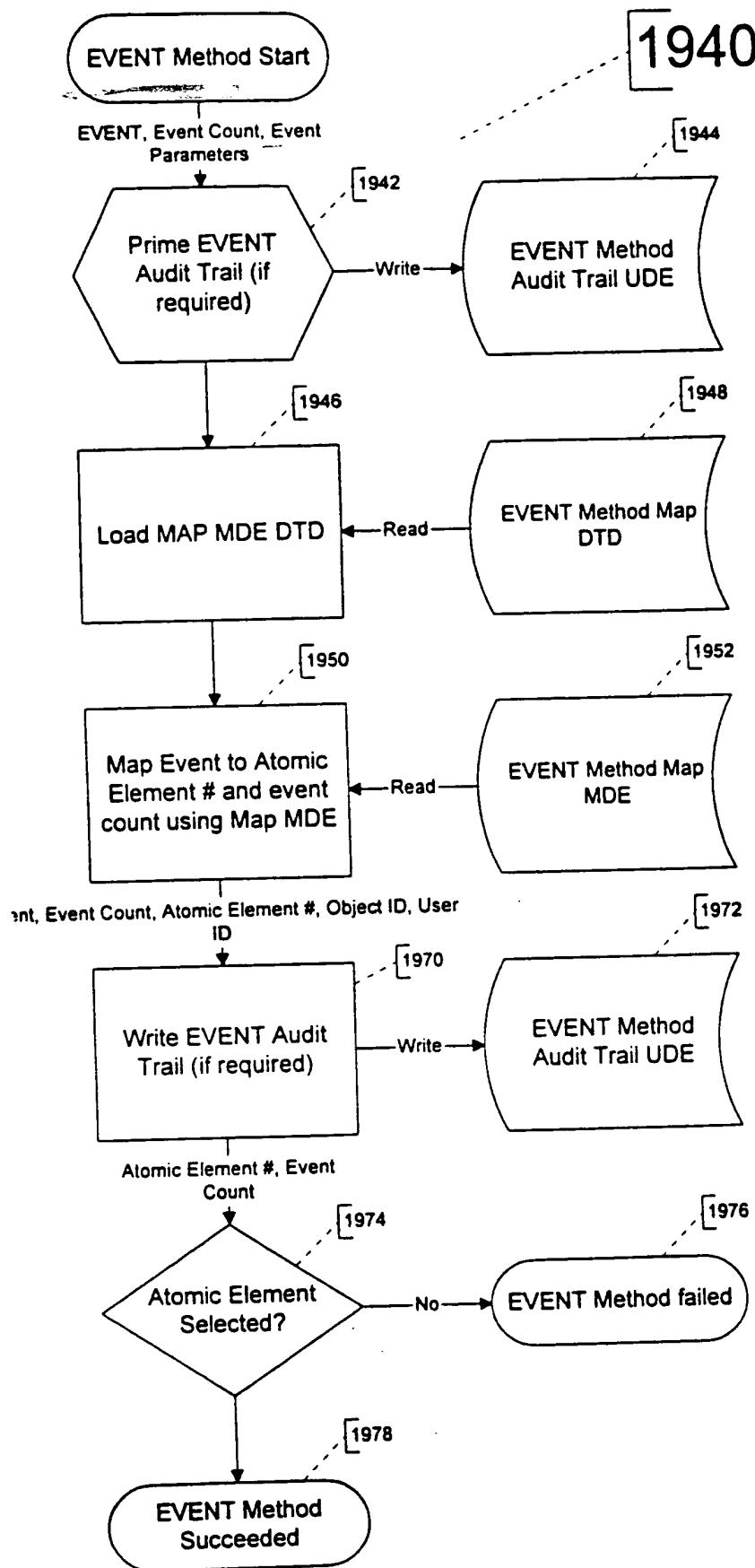


Figure 53a

# ACCESS Method Process Flow

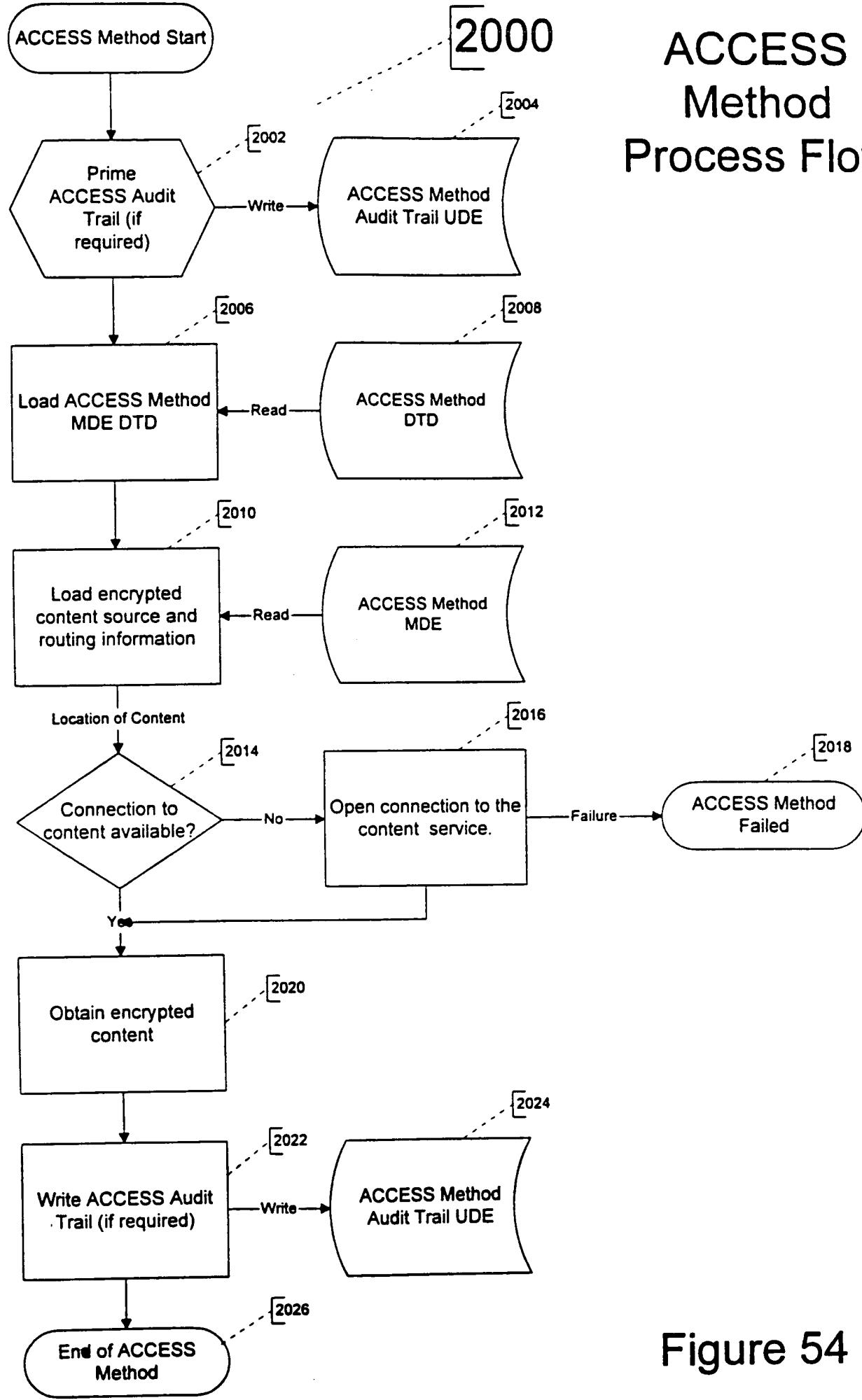


Figure 54

# BILLING Method Process Flows

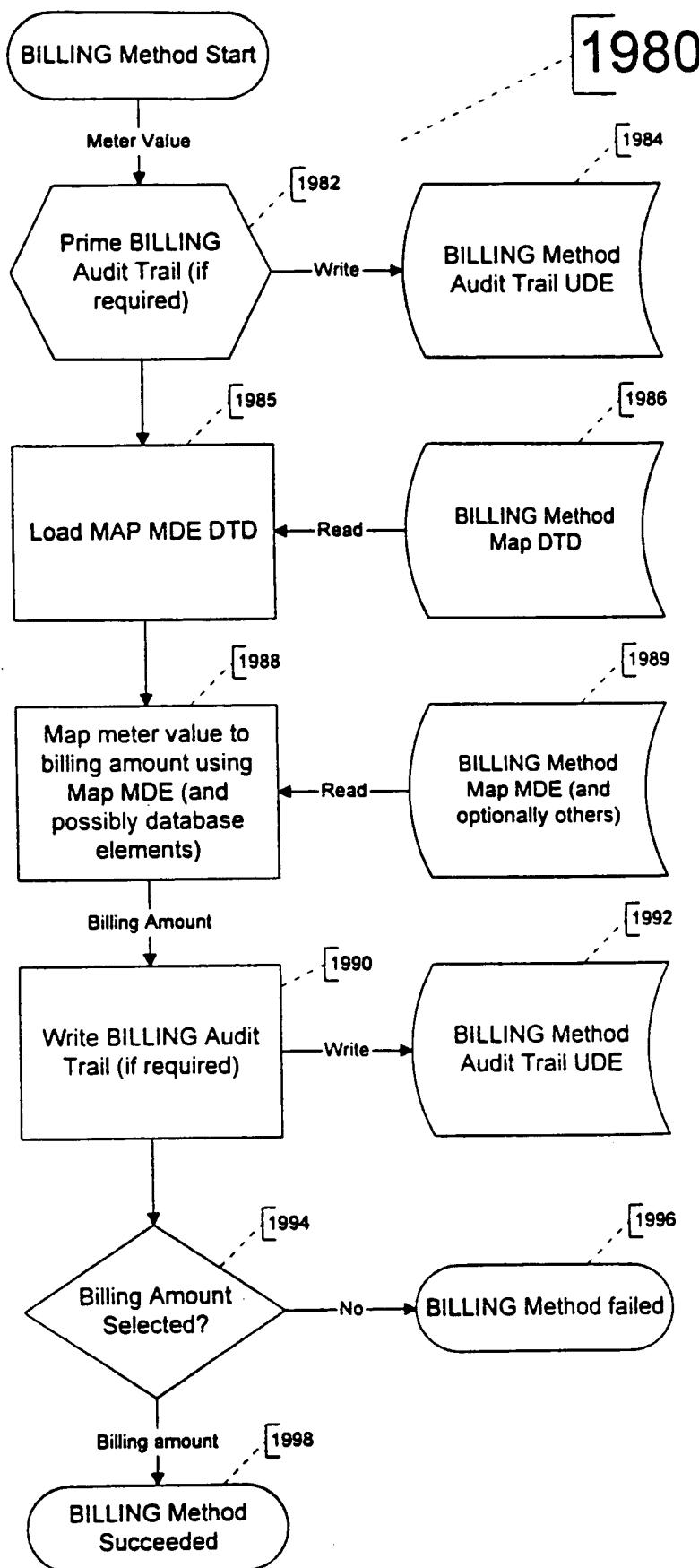


Figure 53c

# ENCRYPT Method Process Flow

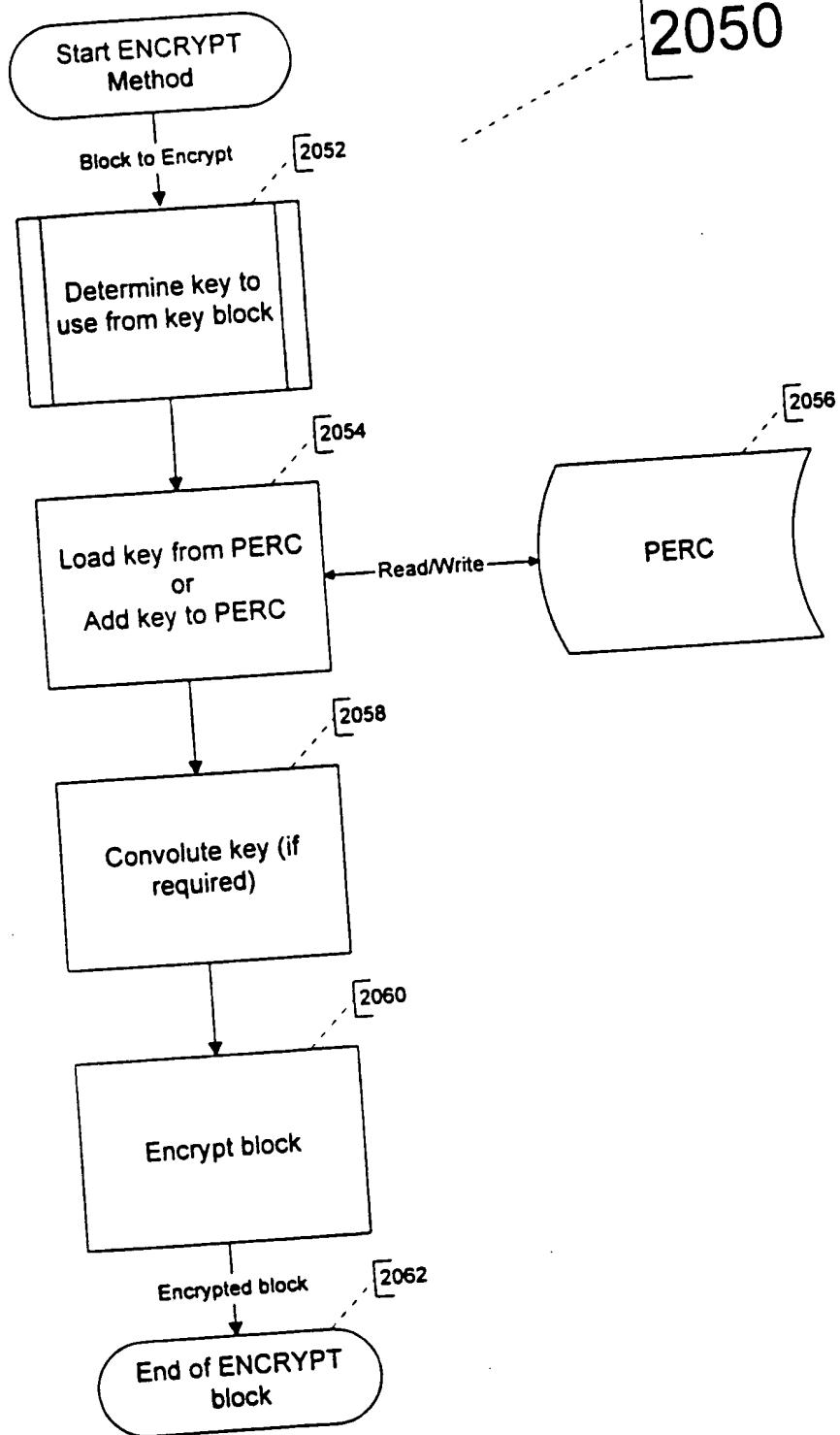


Figure 55b

# DECRYPT Method Process Flow

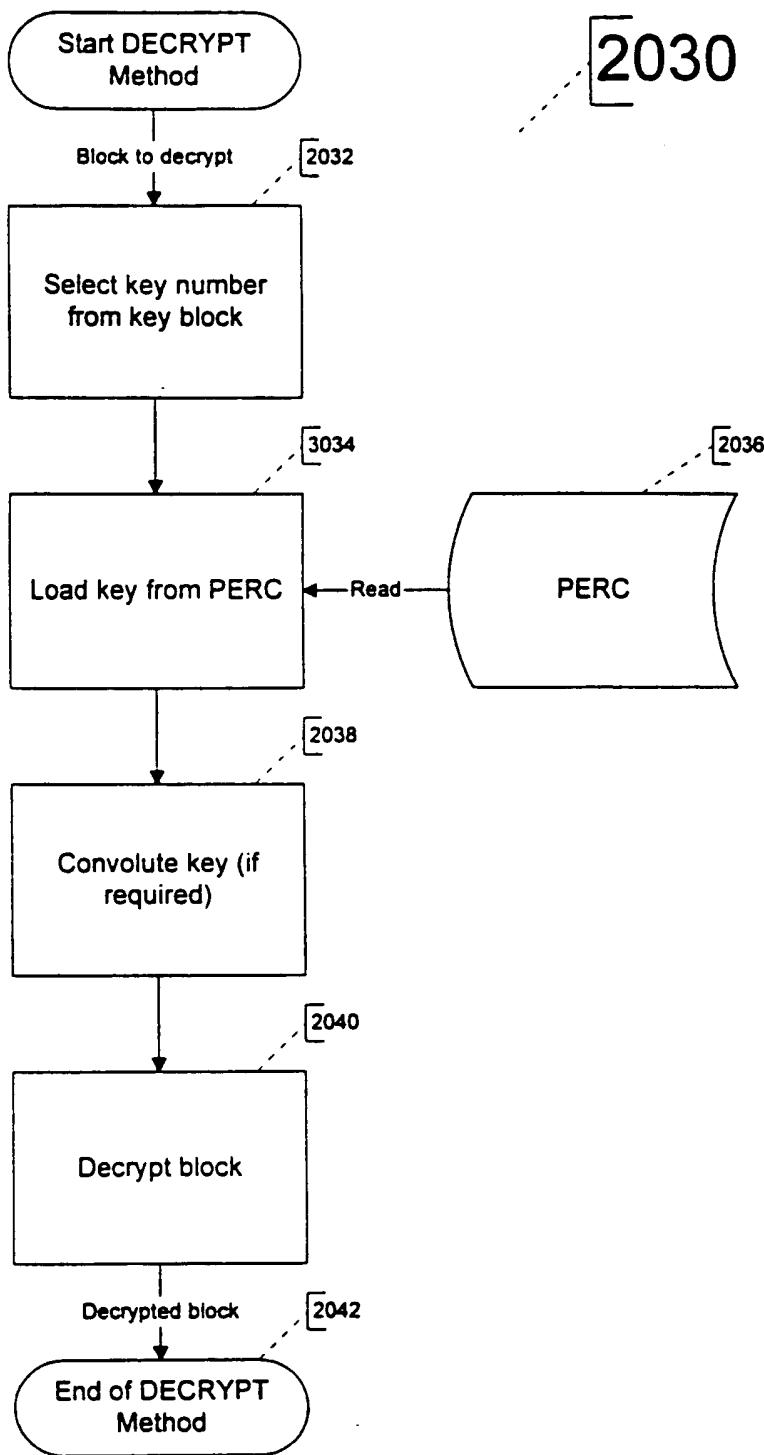


Figure 55a

# EXTRACT Method Process Flow

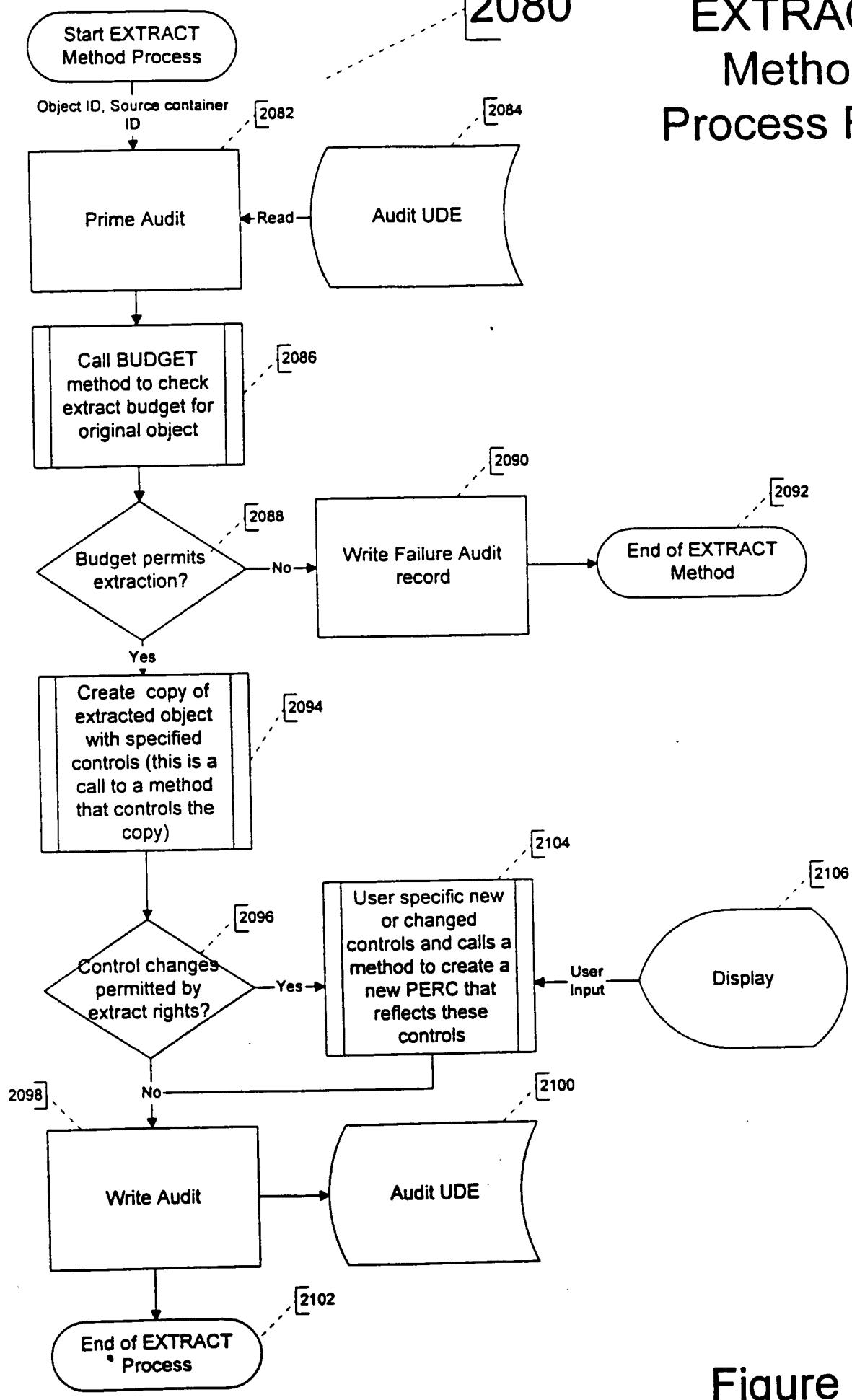


Figure 57a

# CONTENT Method

## Process Flow

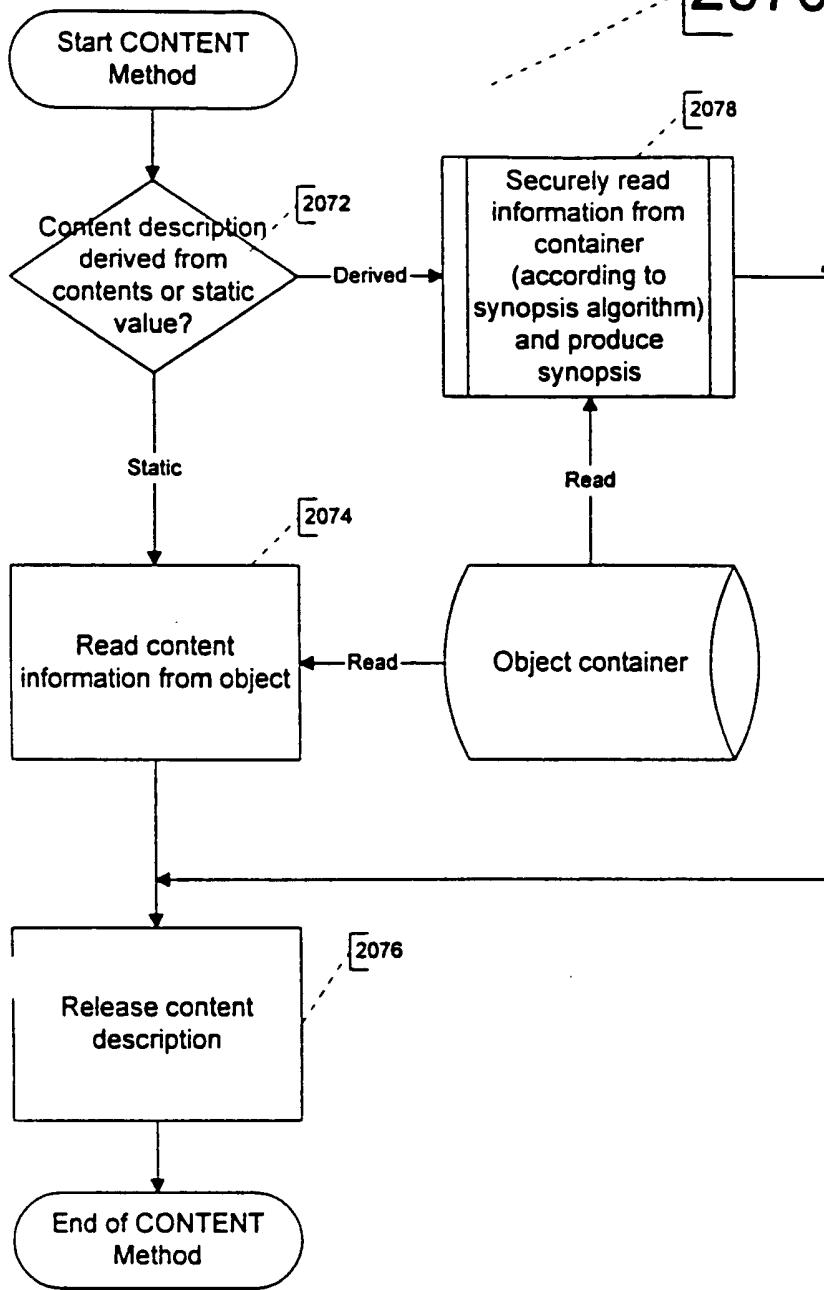
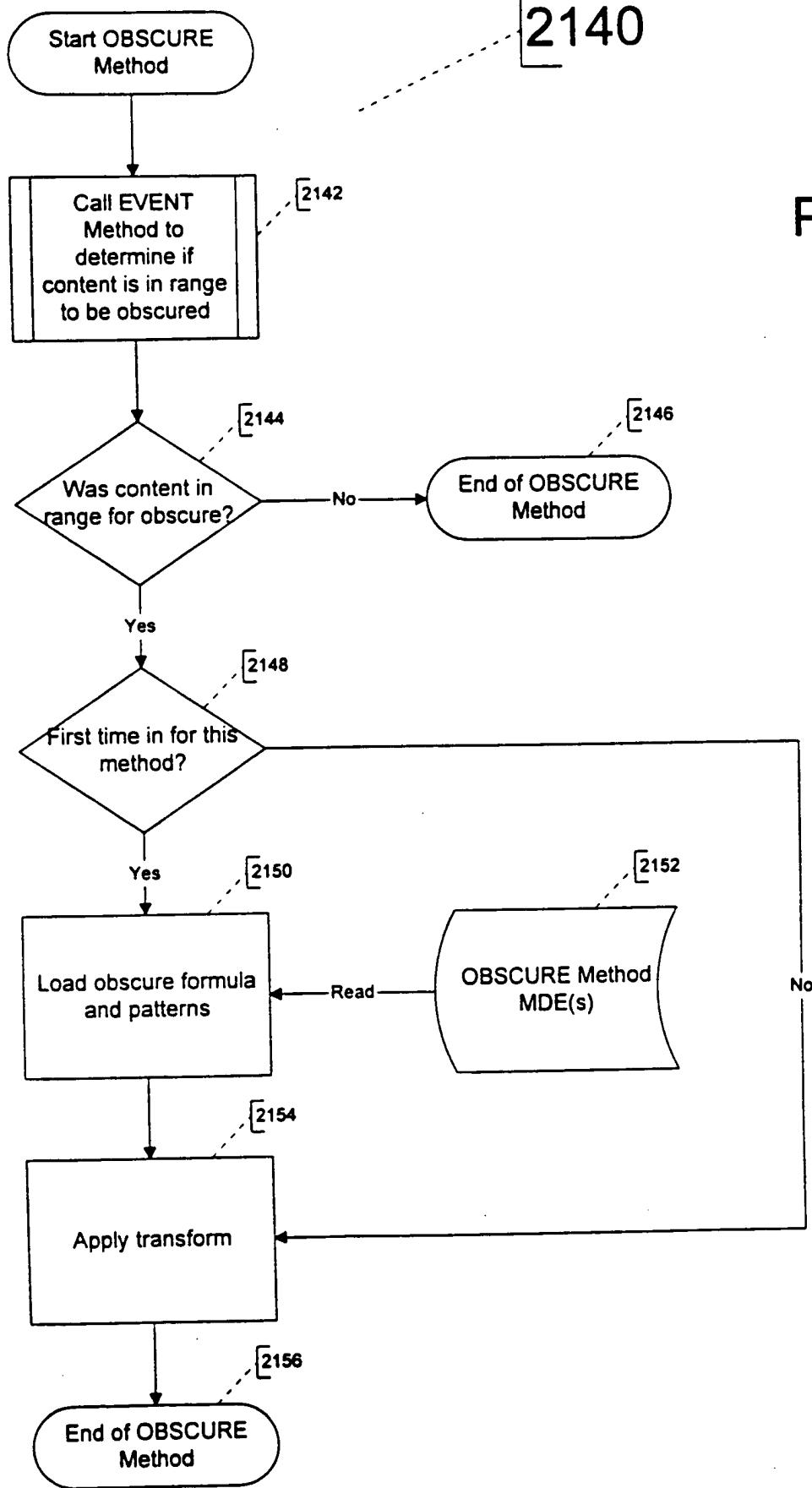


Figure 56



OBSCURE  
Method  
Process Flow

Figure 58a

# EMBED Method Process Flow

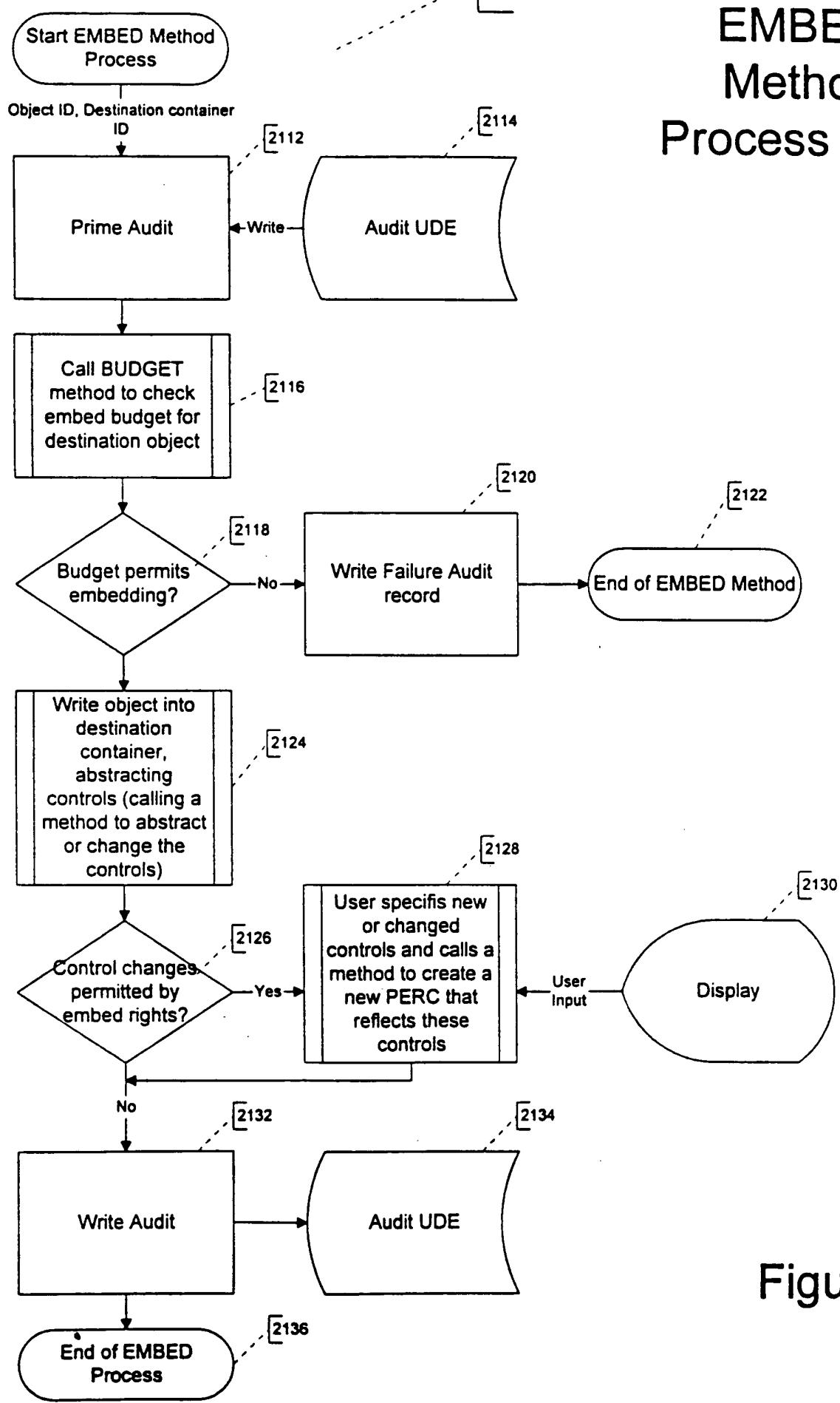


Figure 57b

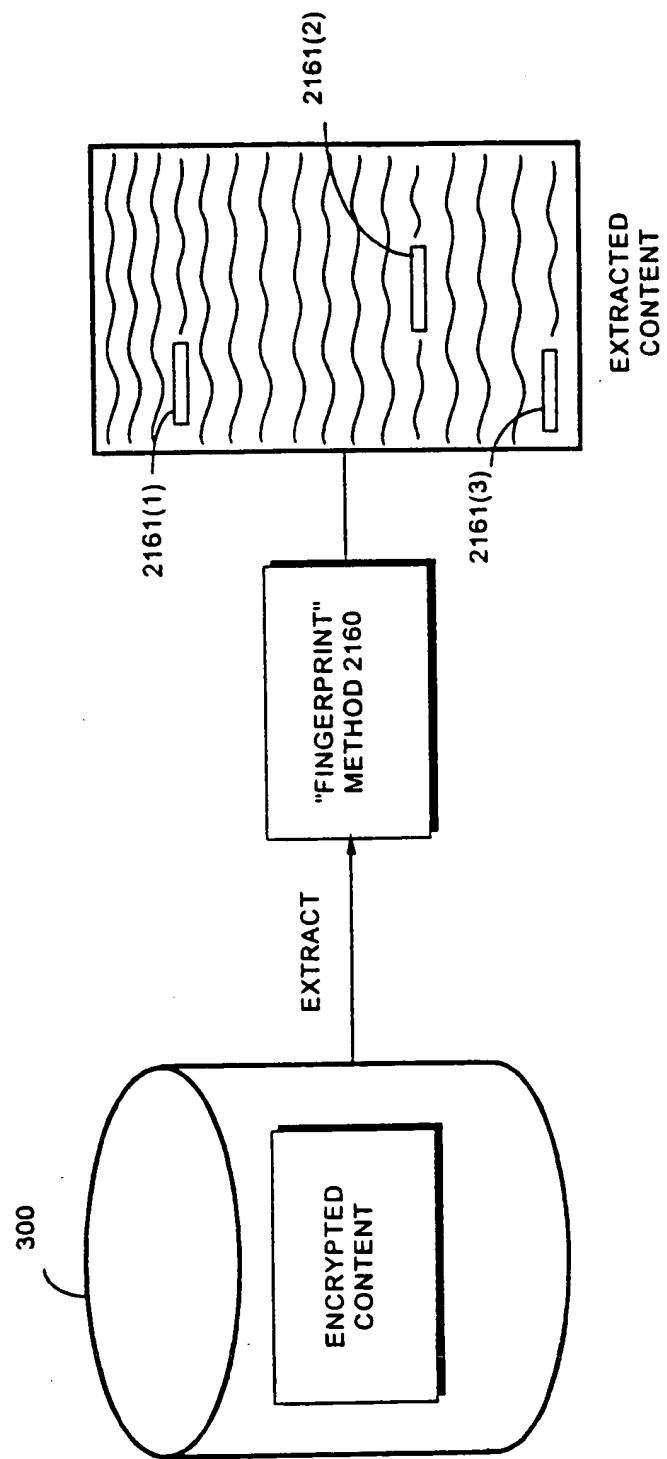
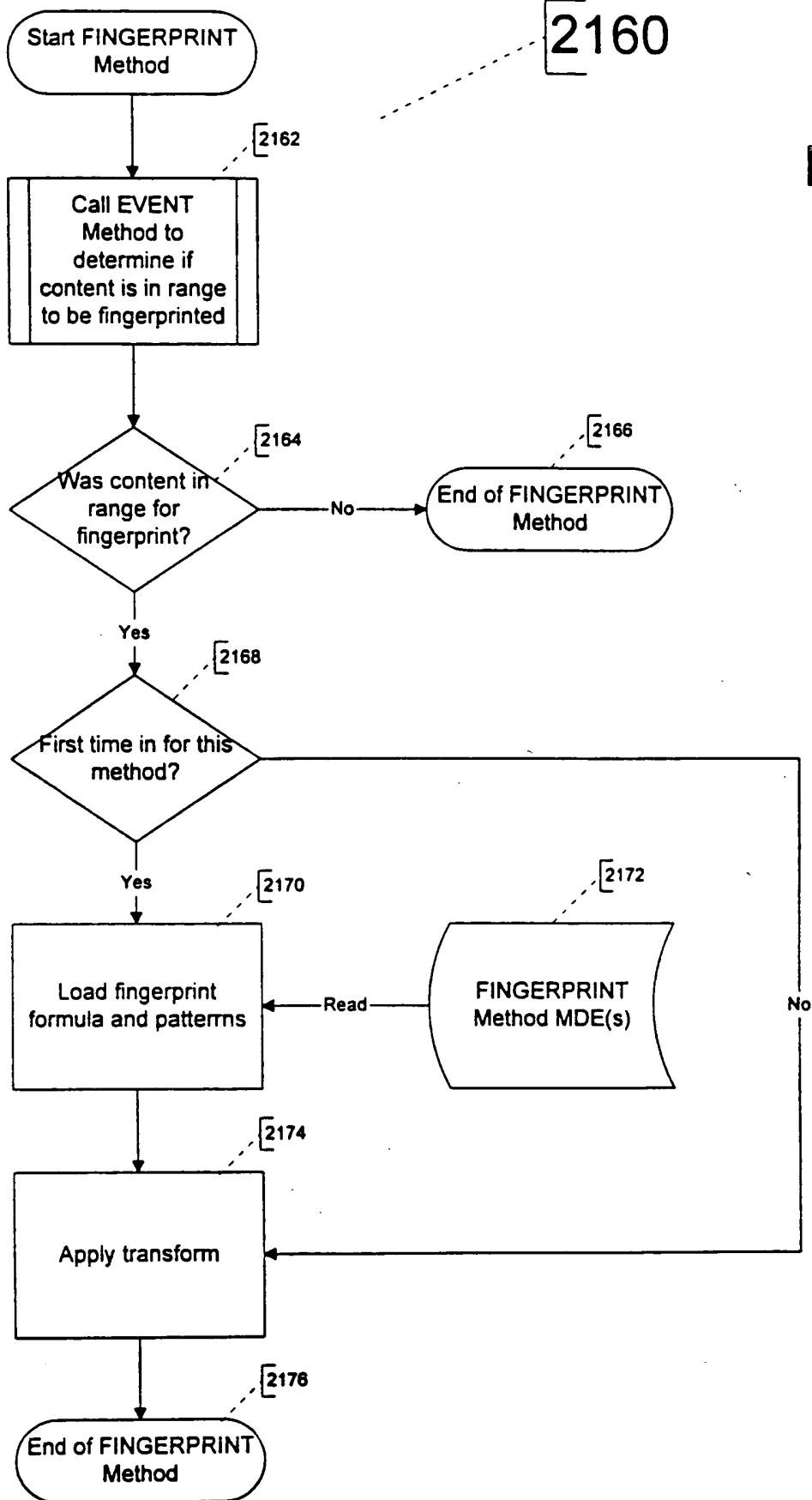


FIG. 58C



## FINGERPRINT Method Process Flow

Figure 58b

# PANIC Method Process Flow

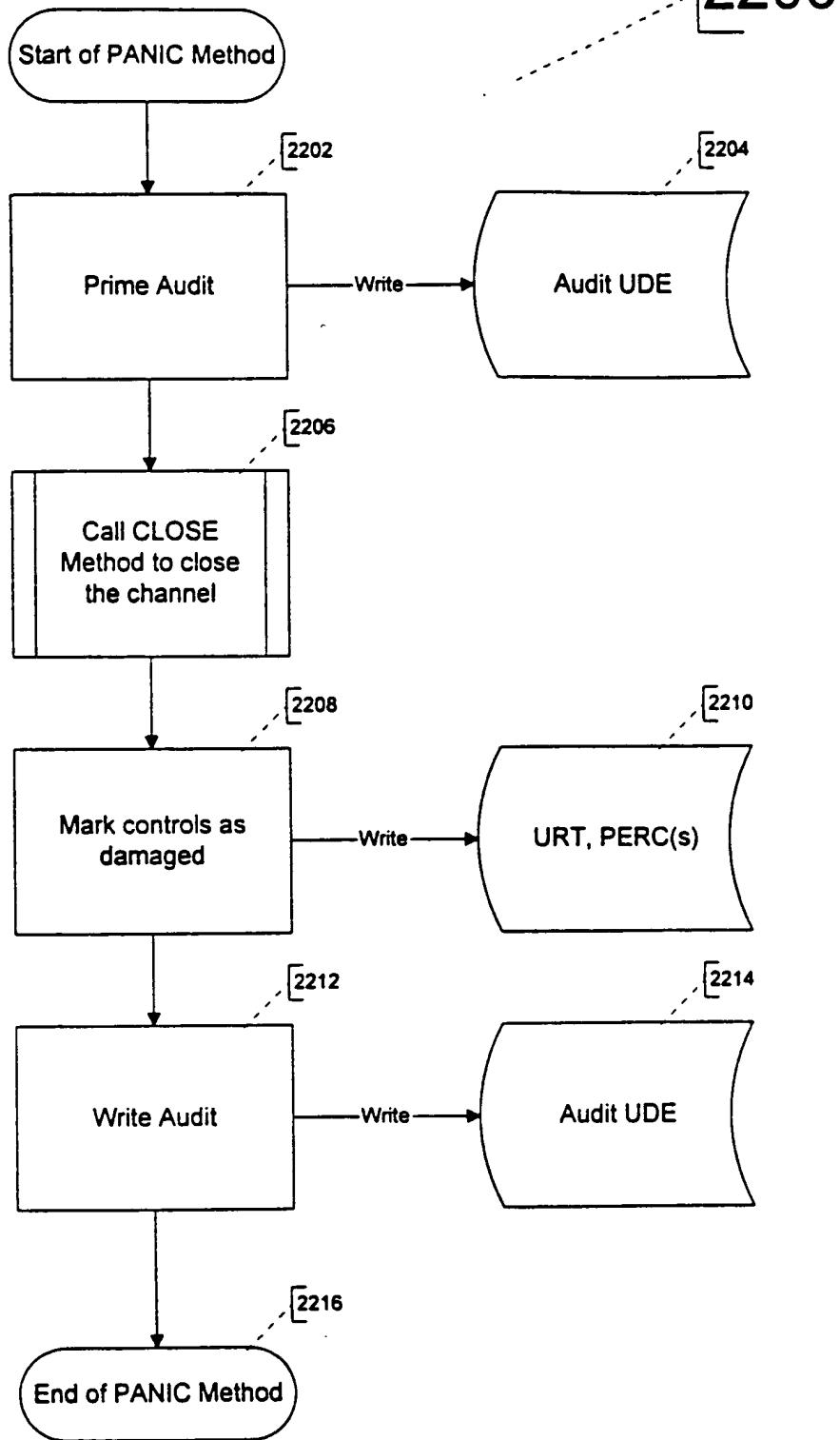


Figure 60

# DESTROY Method Process Flow

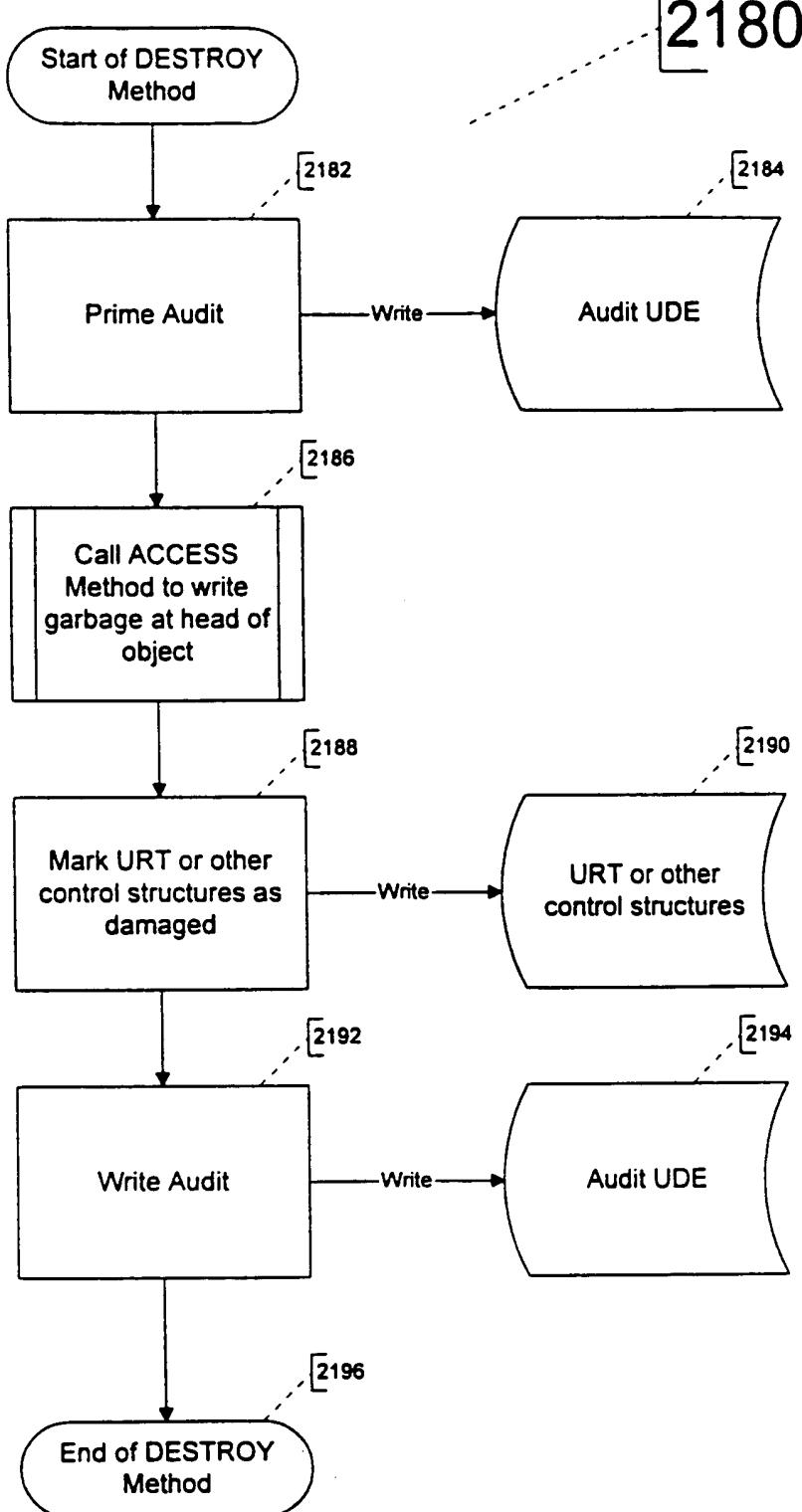
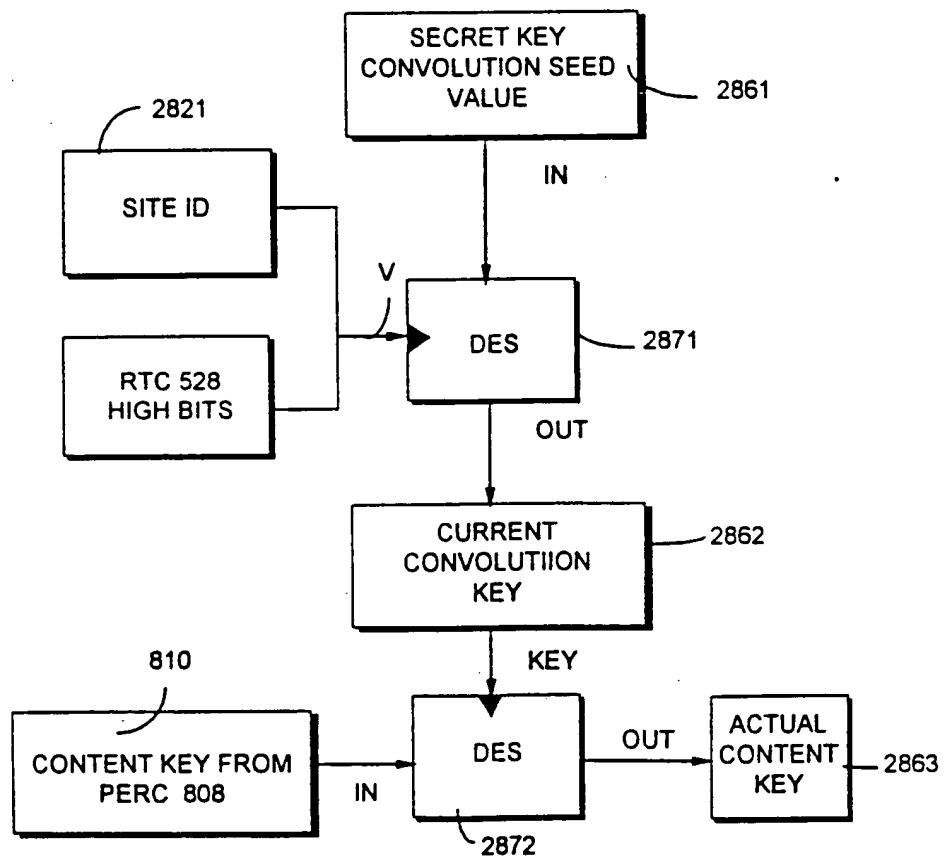


Figure 59

**FIG. 62**  
**KEY CONVOLUTION PROCESS**



# METER Method Use Process Flow

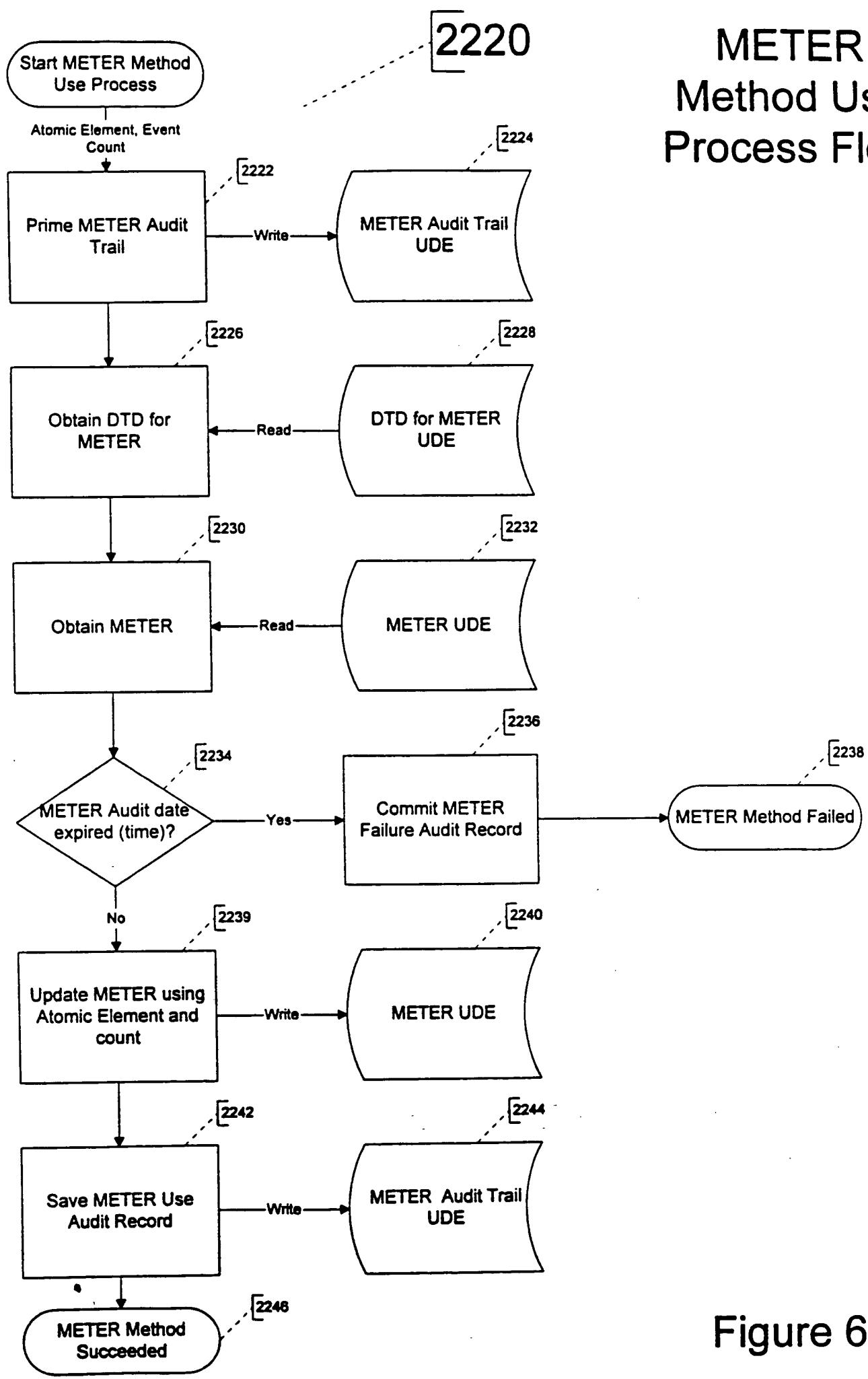
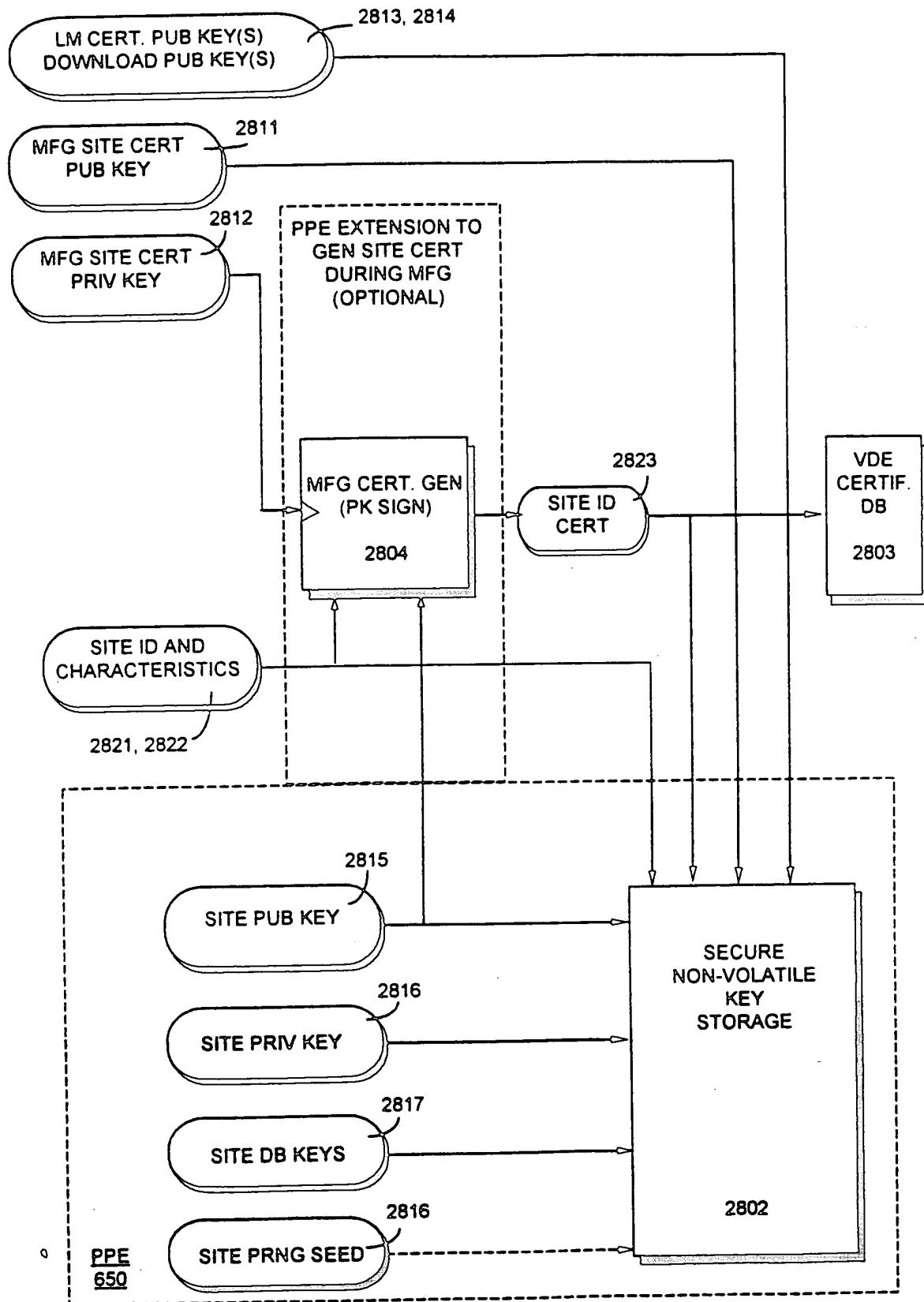
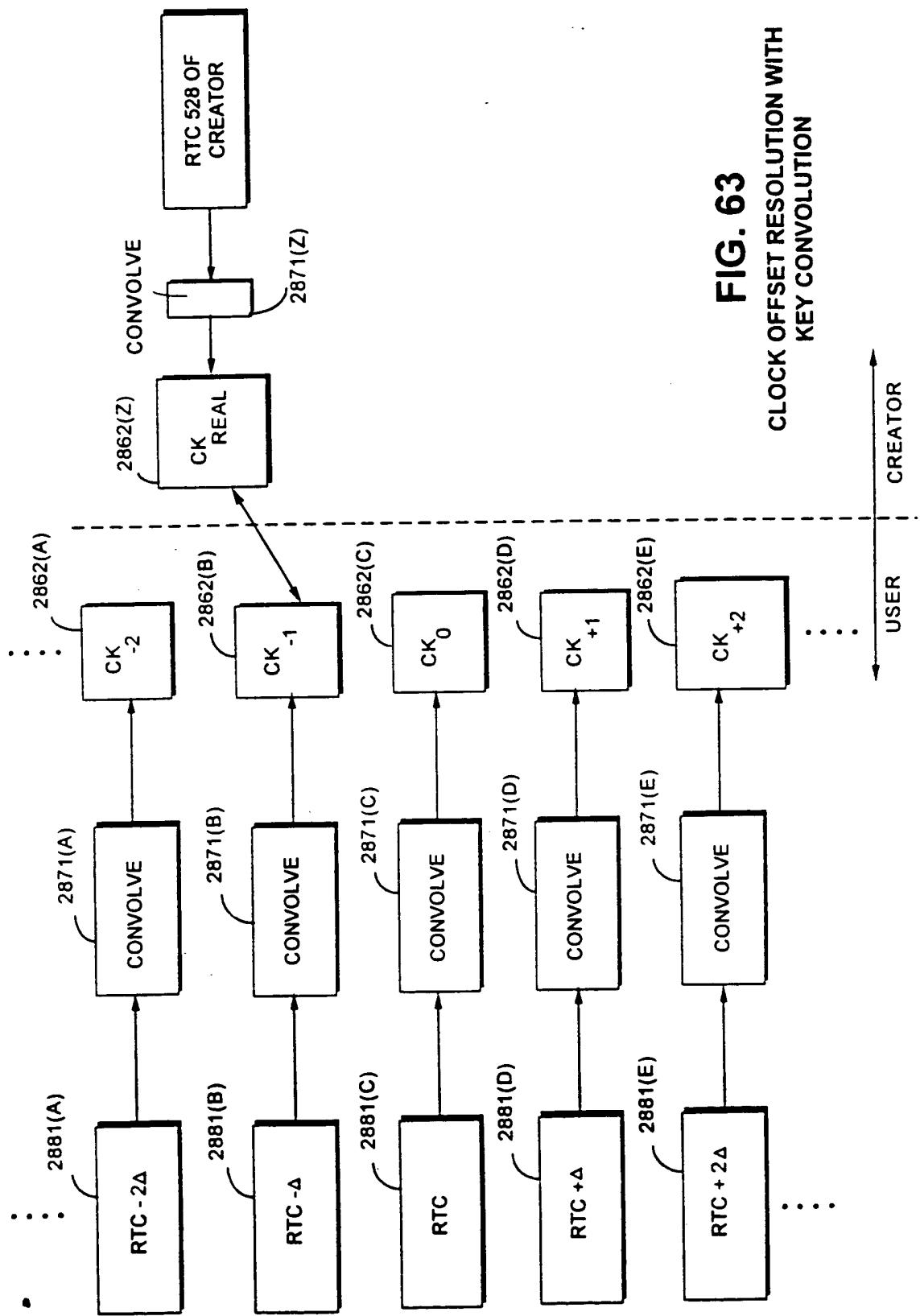


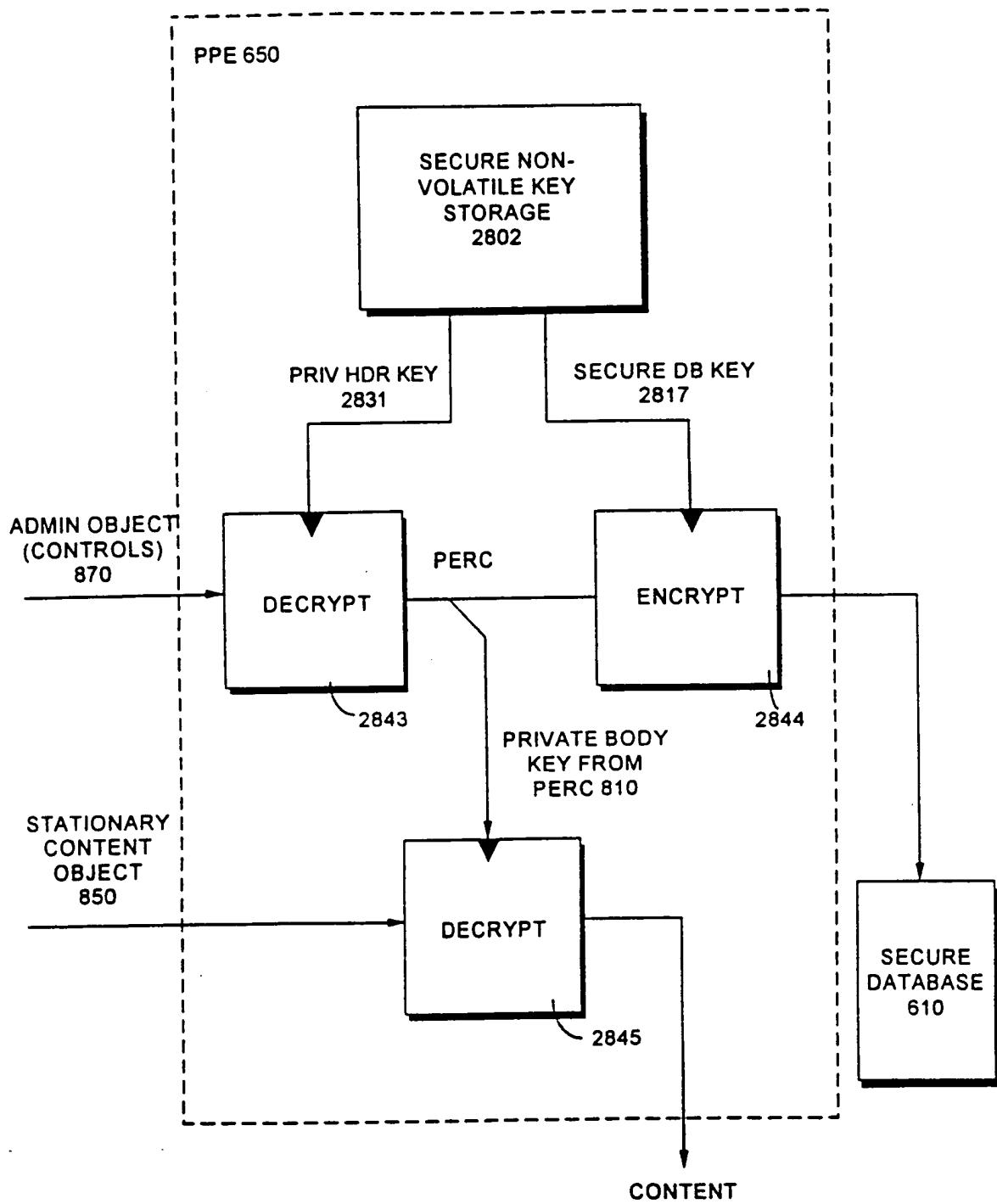
Figure 61

FIG. 64 SPU KEY INITIALIZATION/INSTALLATION



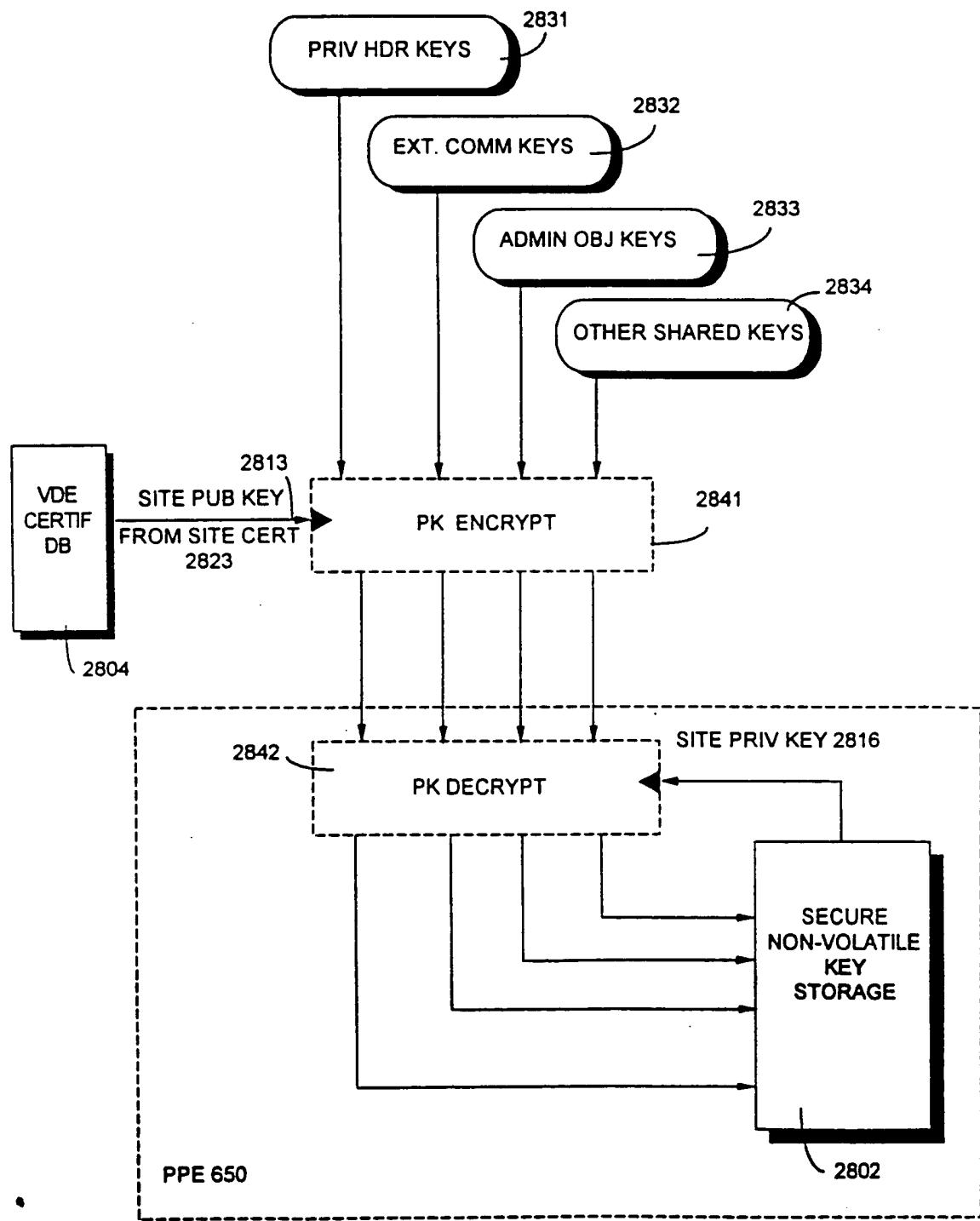


**FIG. 63**  
CLOCK OFFSET RESOLUTION WITH  
KEY CONVOLUTION

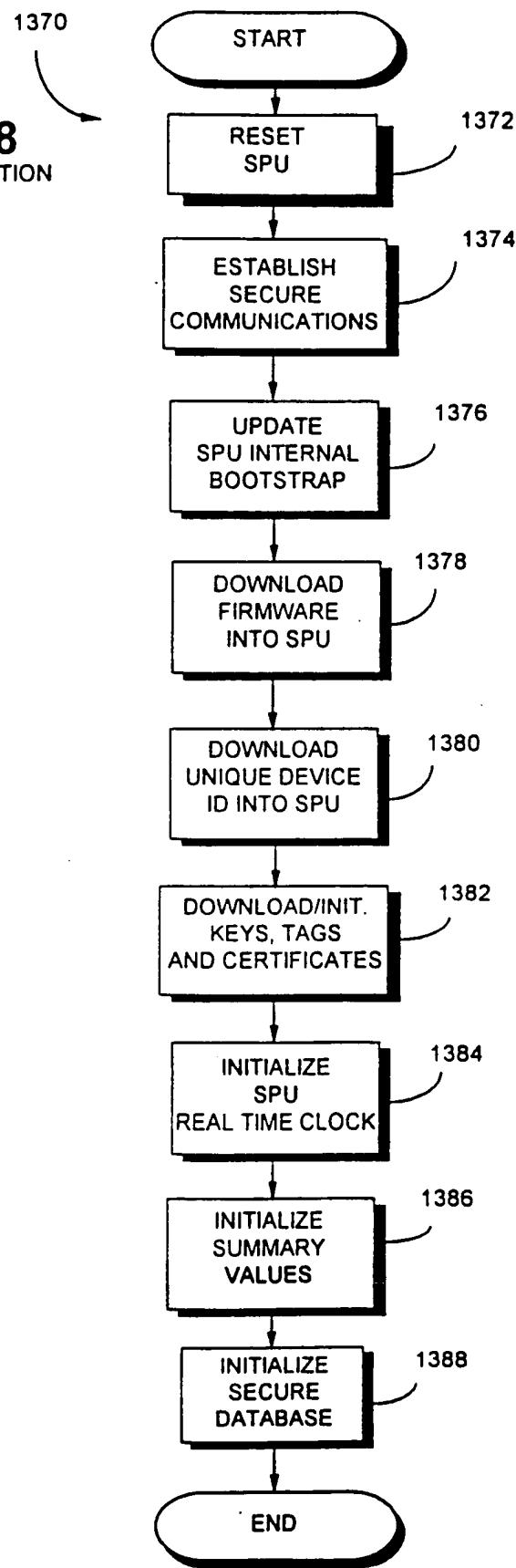


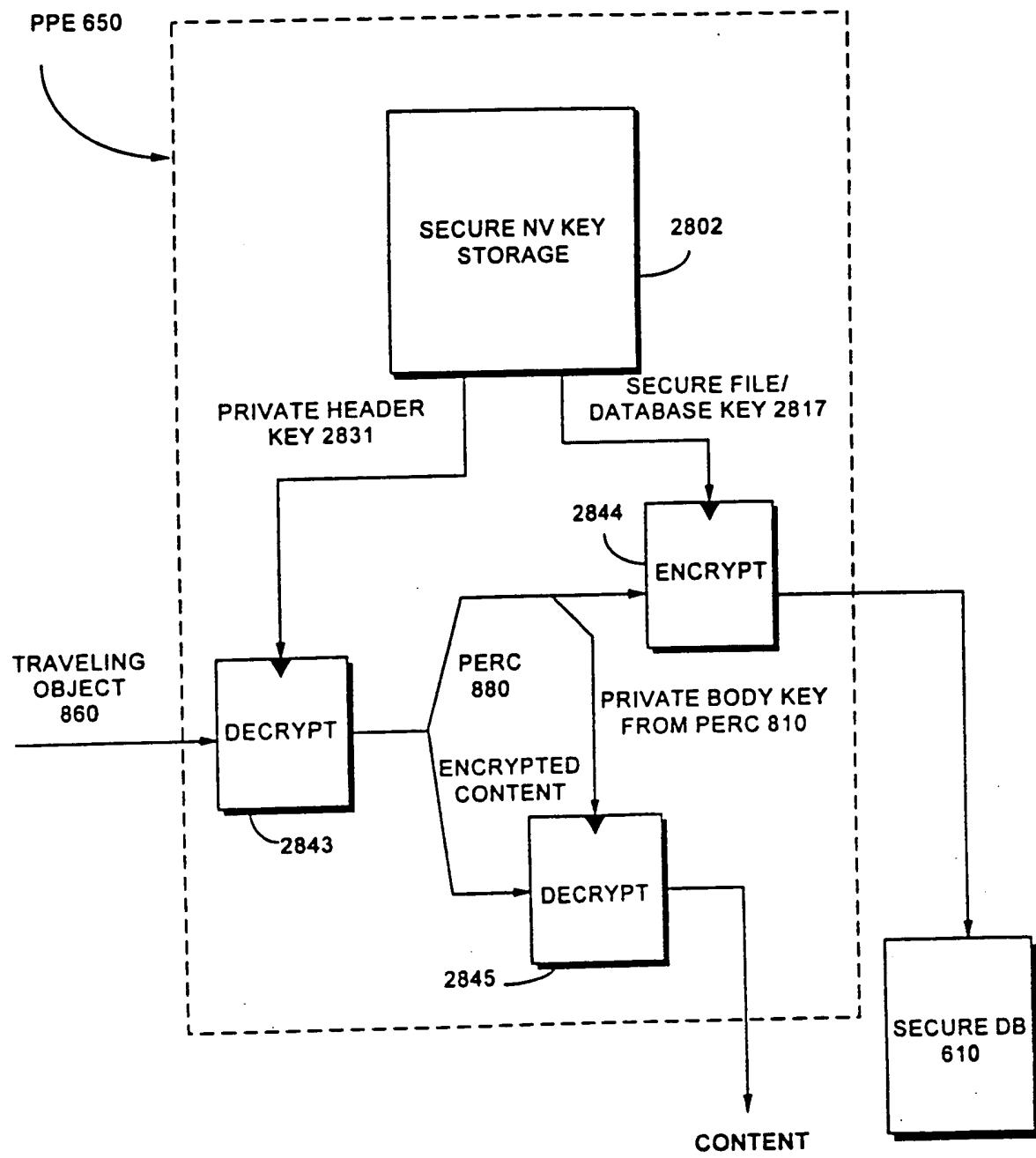
**FIG. 66** STATIONARY OBJECT DECRYPTION

**FIG. 65** KEY INSTALLATION & UPDATE



**FIG. 68**  
SPU INITIALIZATION





**FIG. 67 TRAVELING OBJECT DECRYPTION**

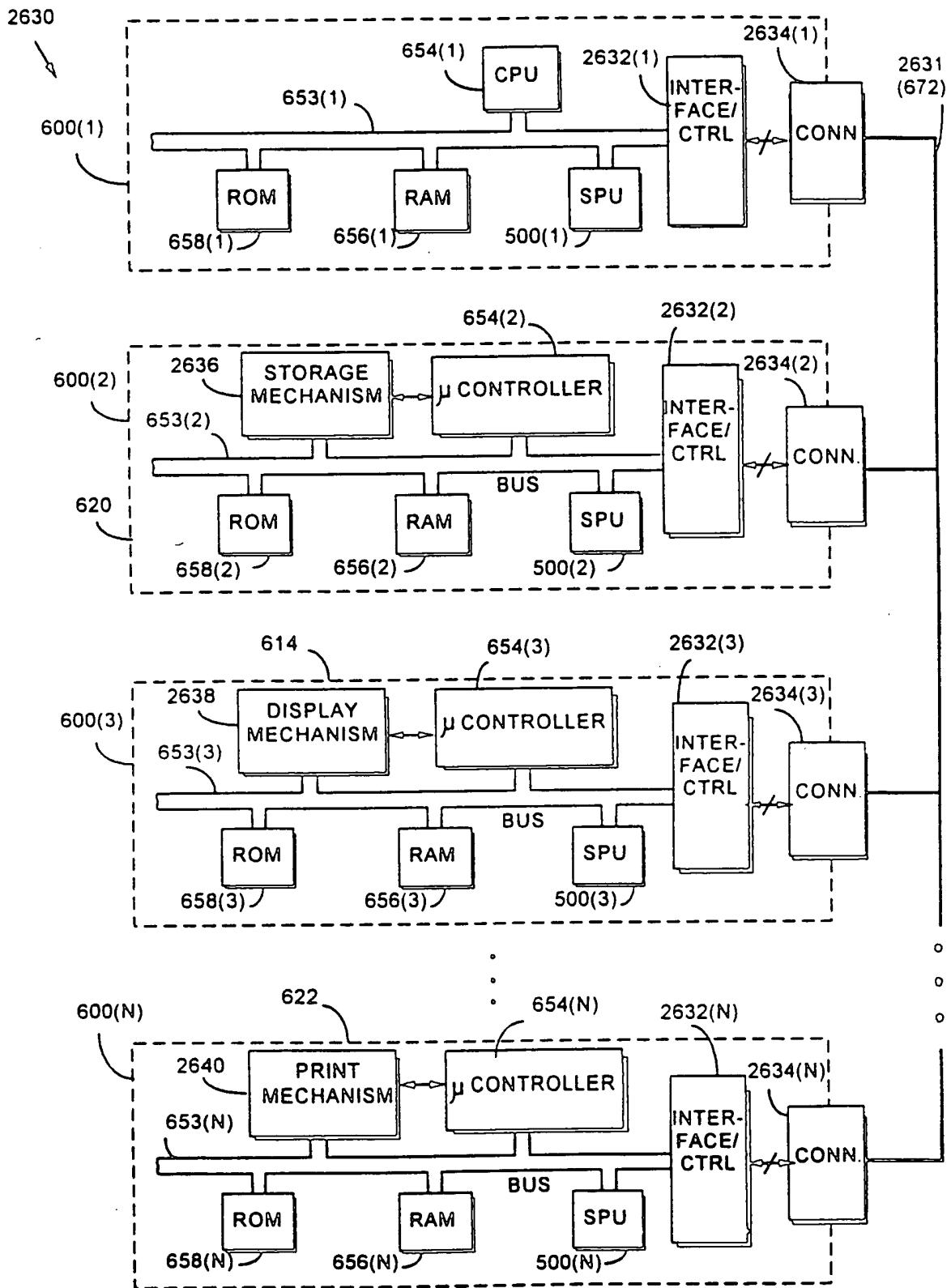


FIG. 70

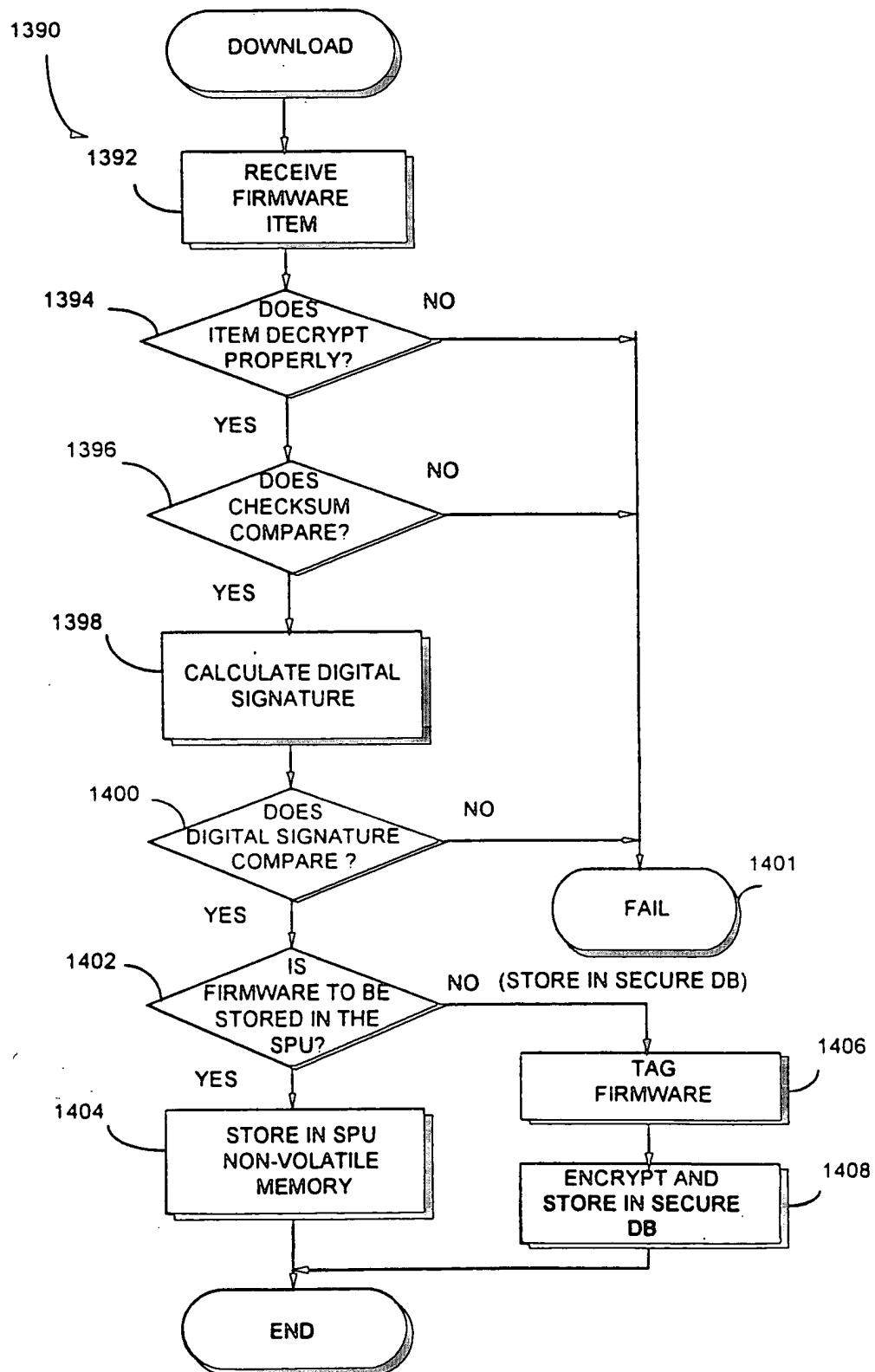


FIG. 69  
SPU FIRMWARE  
DOWNLOAD

LOG IN USER INTERFACE

182

USER NAME:	SHEAR, V.	LOGIN
PASSWORD:	*****	CANCEL
<input type="checkbox"/> LOGIN AT STARTUP		HELP

FIG. 72A

FIG. 72B

2660

YOU HAVE REQUESTED THESE PROPERTIES:

! LOONEY TUNES NEWS!

2662

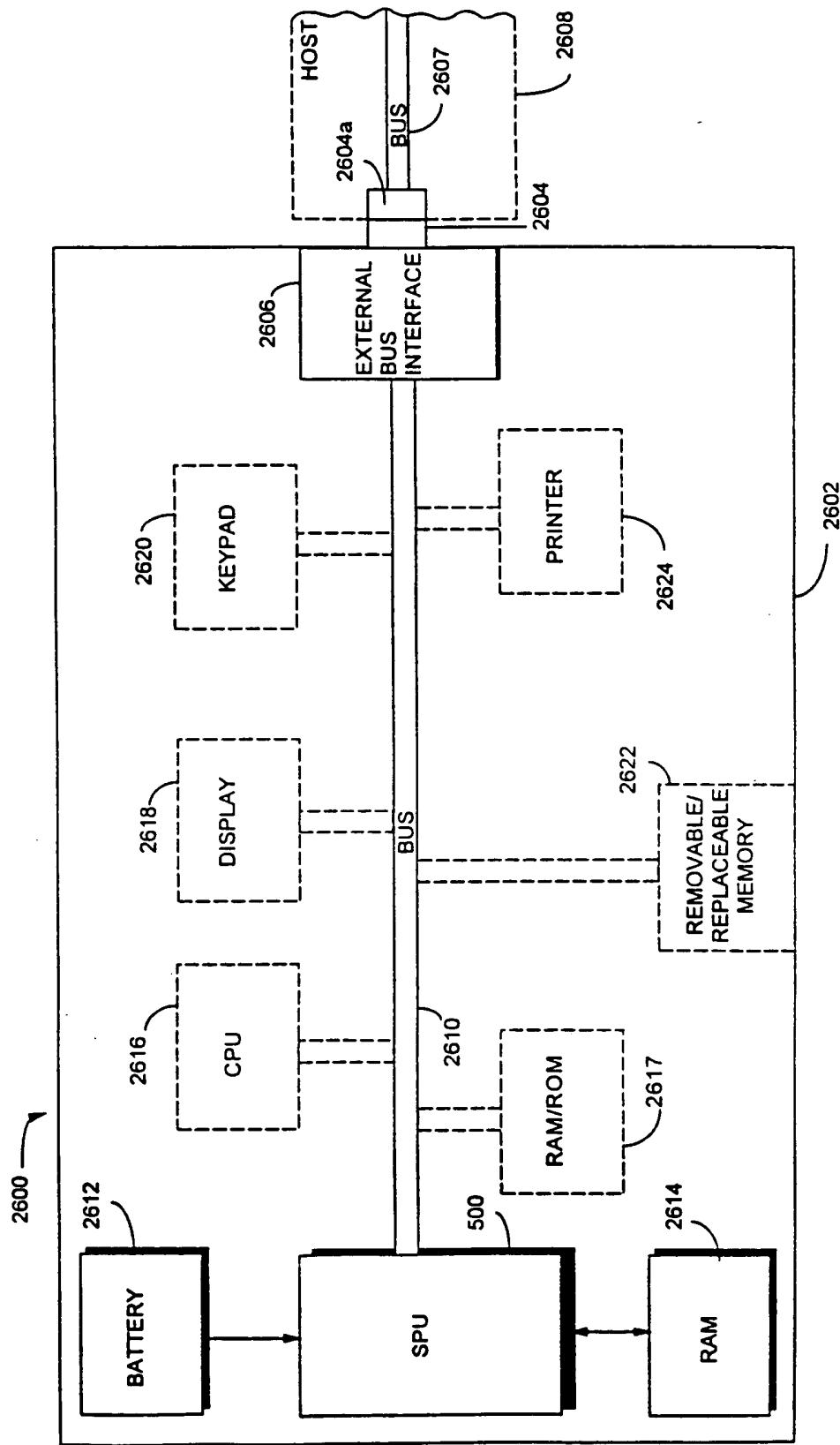
PROPERTY INFO      Your Cost: \$7.50      MORE OPTIONS

2664

APPROVE	SUSPEND	CANCEL
---------	---------	--------

**FIG. 71**

PORTABLE APPLIANCE



**FIG. 72D**

PROPERTY INFO						
PROPERTY:	SIZE:	PUBLISHER:	AMOUNT:	UNITS:	COST/UNIT:	TYPE:
CHUCK JONES BIOGRA...	256KB	WARNER NEW MEDIA	64	KBYTE	\$1.25	PREVIEW ✓
► BUGS BUNNY.JPG...	1MB	WARNER NEW MEDIA	1	RECORD	\$5.00	DISPLAY ✓
BUGS BUNNY.JPG...	1MB	WARNER NEW MEDIA	10	RECORD	\$3.50	DISPLAY
BUGS BUNNY.JPG...	1MB	WARNER NEW MEDIA	25	RECORD	\$2.50	DISPLAY
FRIZ FRELENG BIOGRA...	256KB	WARNER NEW MEDIA	120	SECTOR	\$5.00	PRINT
TEX AVERY BIOGRAP...	256KB	WARNER NEW MEDIA	50	PERCENT	\$2.50	COPY
► DUCKI RABBITI DU...	64MB	WARNER NEW MEDIA	7.0	MINUTE	\$7.50	COPY-PRO
MEL BLANC BIOGRAPH...	256KB	WARNER NEW MEDIA	1	SPECIAL	\$25.25	INSTALL
LOONEY TUNES DATAB...	600MB	WARNER NEW MEDIA	1	OBJECT	\$2000.00	ALL
SET LIMITS...		SHOW BUDGETS	ACQUIRE BUDGET...	HISTORY...	TRANSFER...	PREFERENCES...
					FEEDBACK...	HELP!

**YOU HAVE REQUESTED THESE PROPERTIES:**

**LOONEY TUNE NEWS!**

**YOUR COST : \$7.50**

**CANCEL** **APPROVE** **SUSPEND**

**More Options**  **Show Thumbnail**

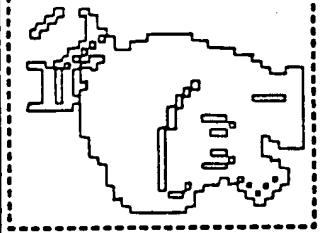


FIG. 72C

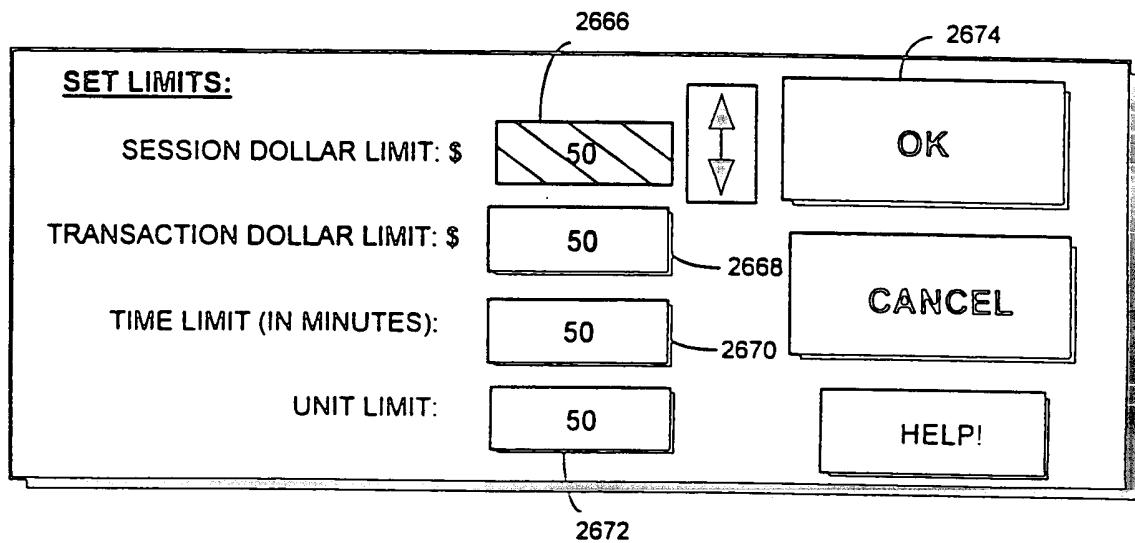


FIG. 74

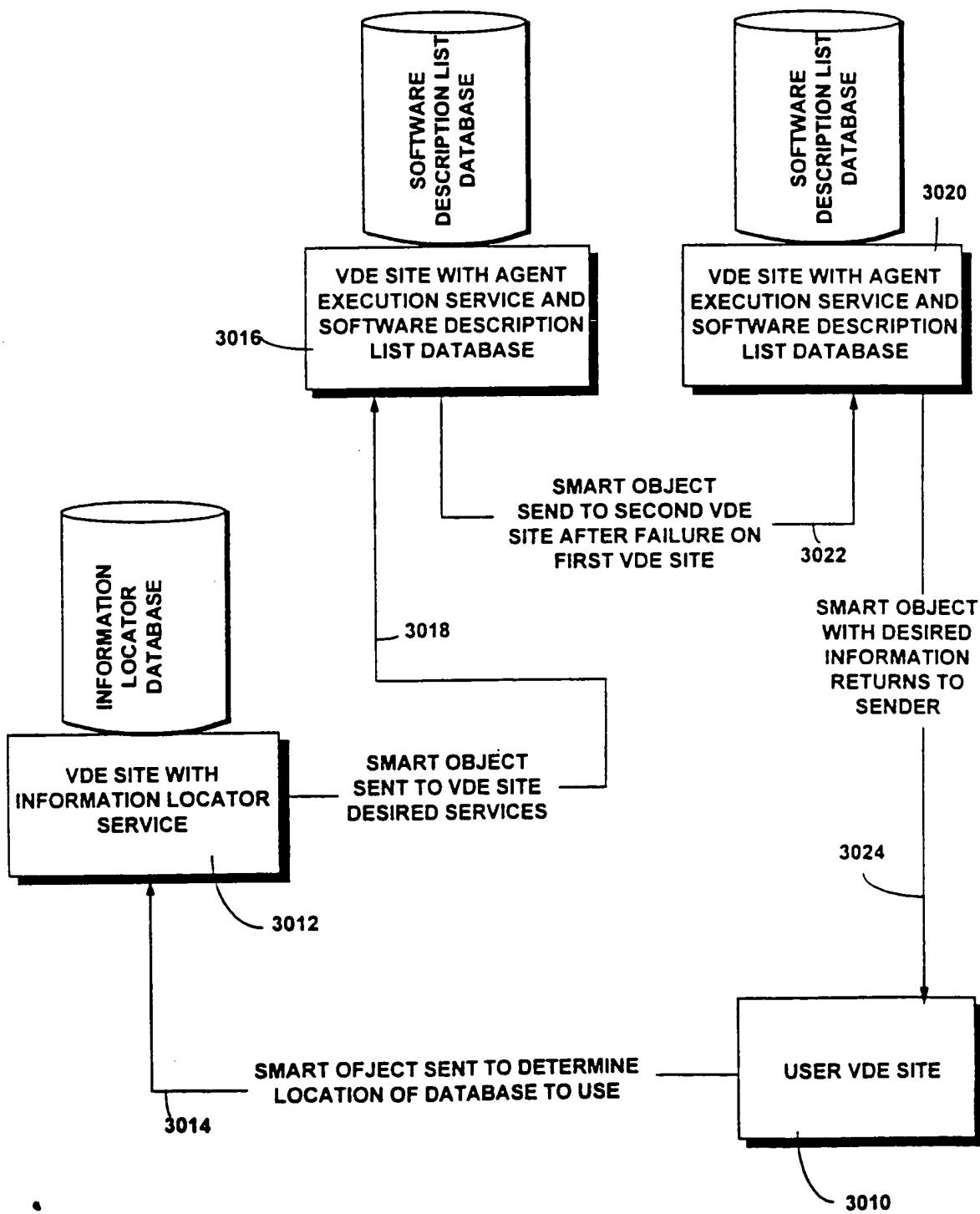


FIG. 73

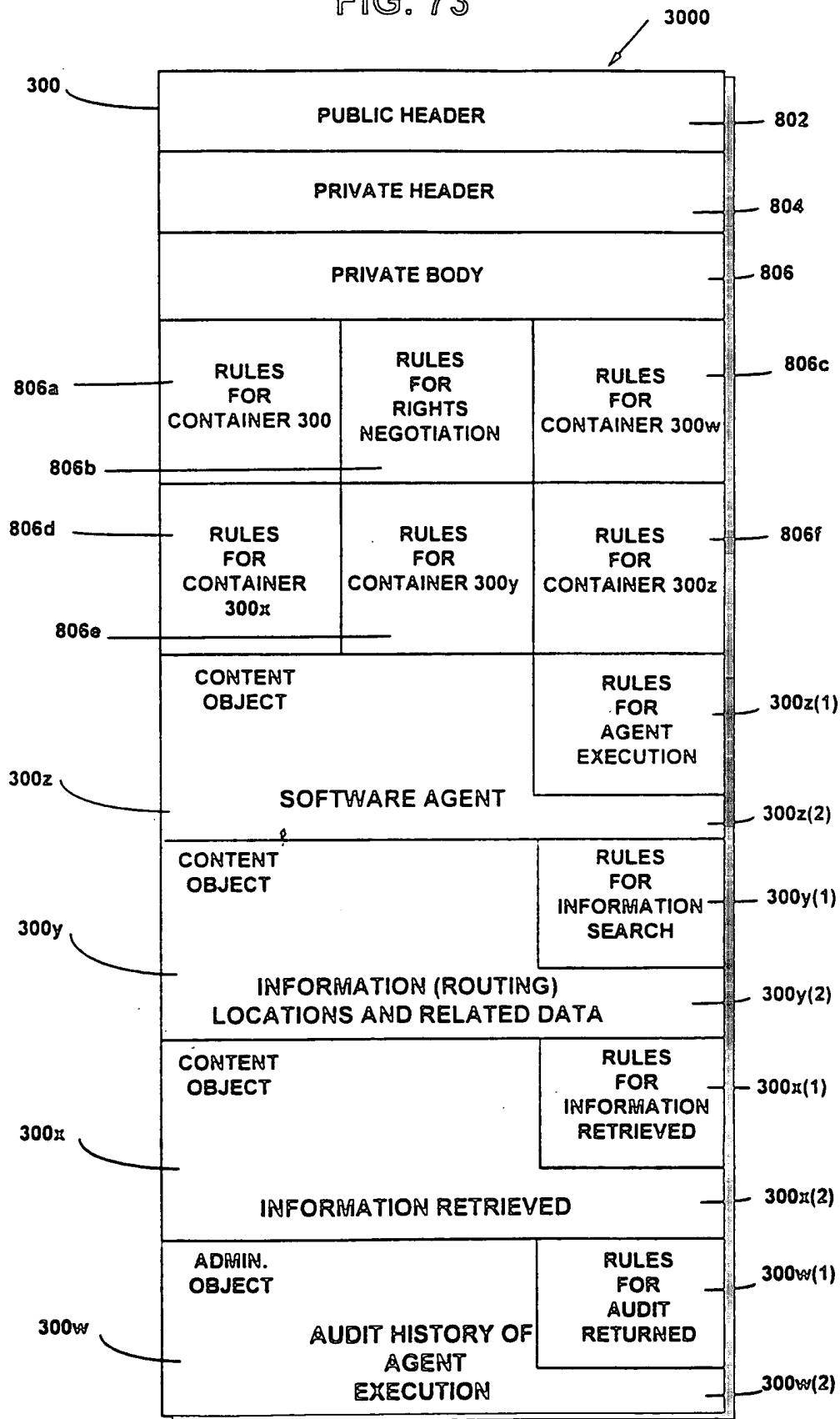


FIG. 75B

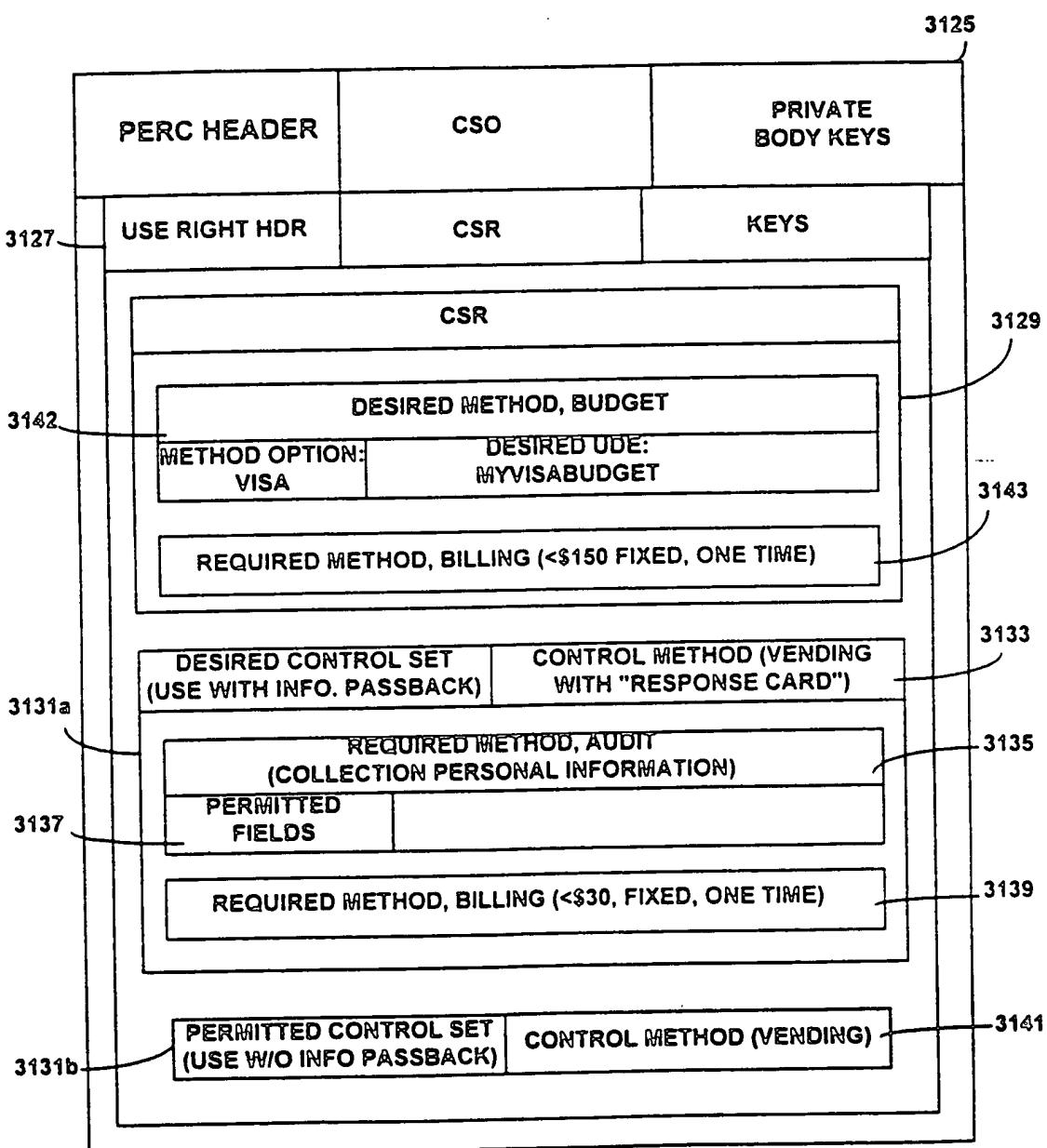


FIG. 75A

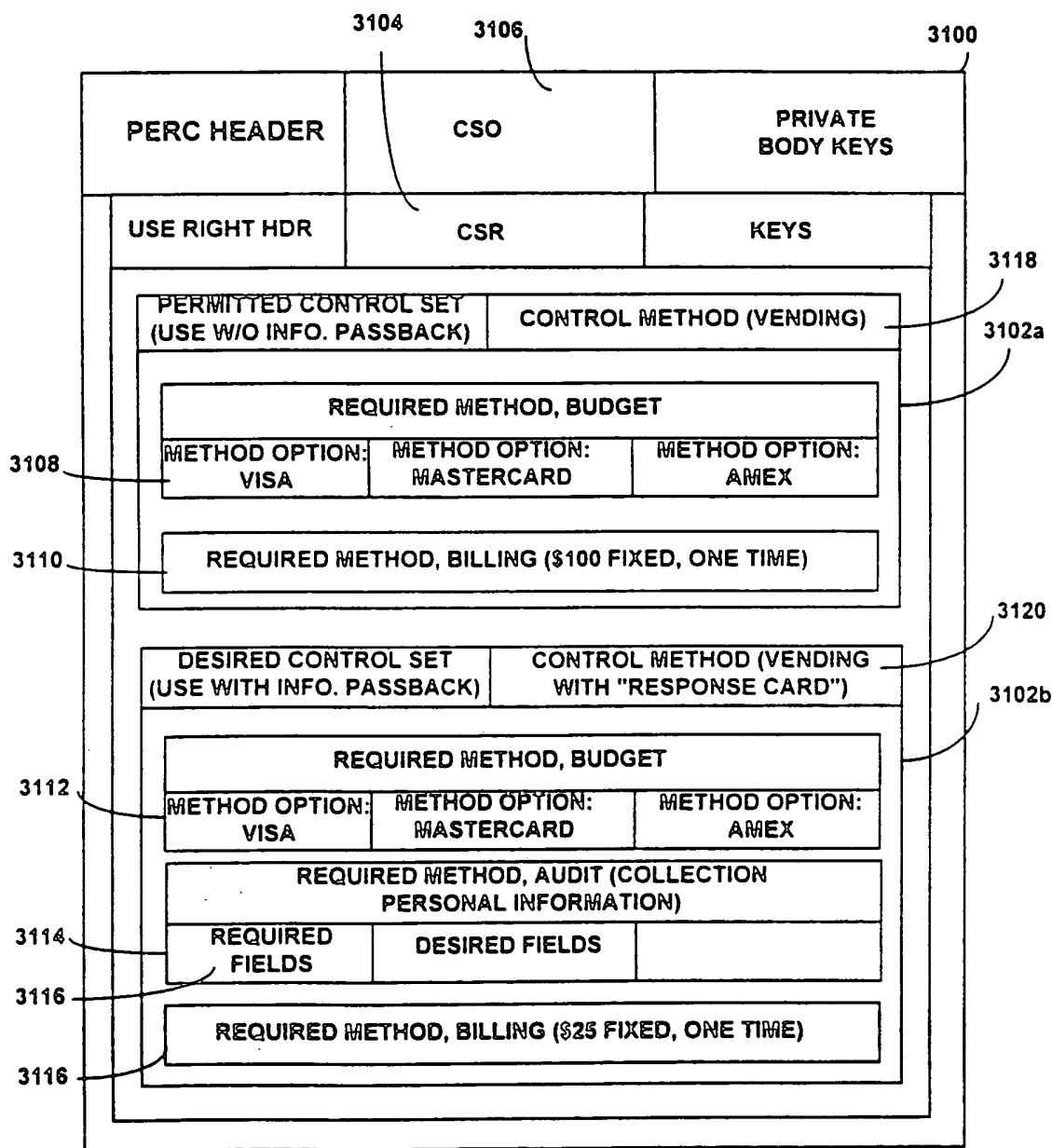


FIG. 75D

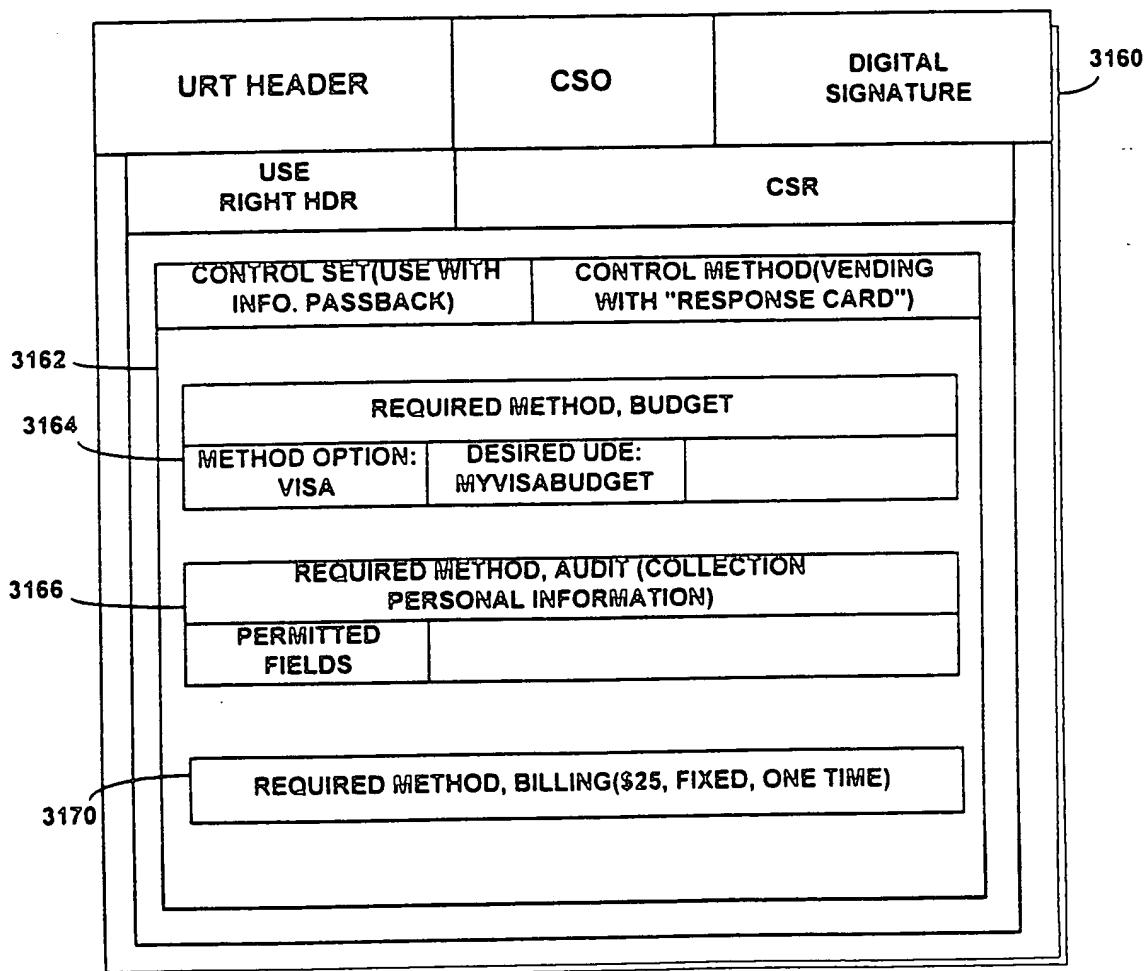
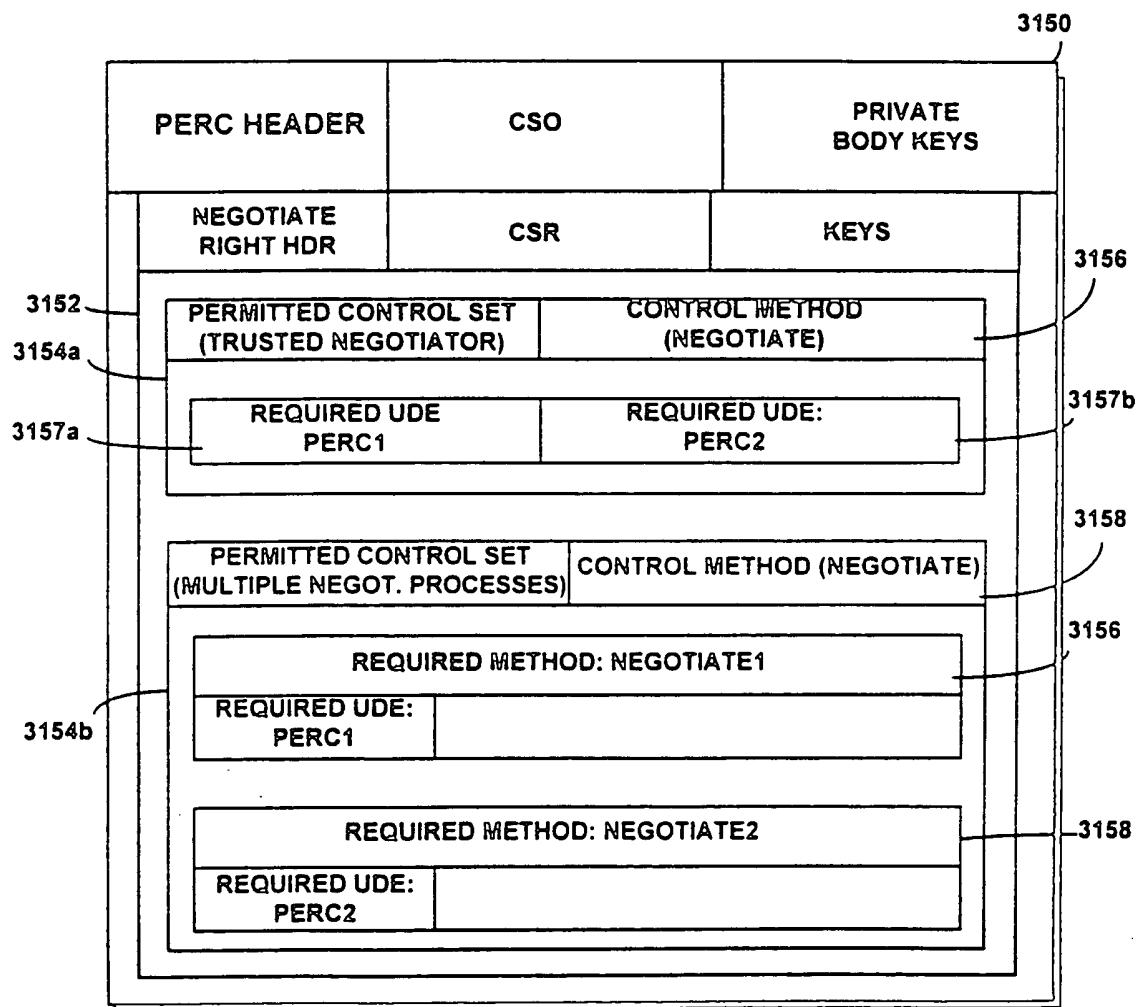
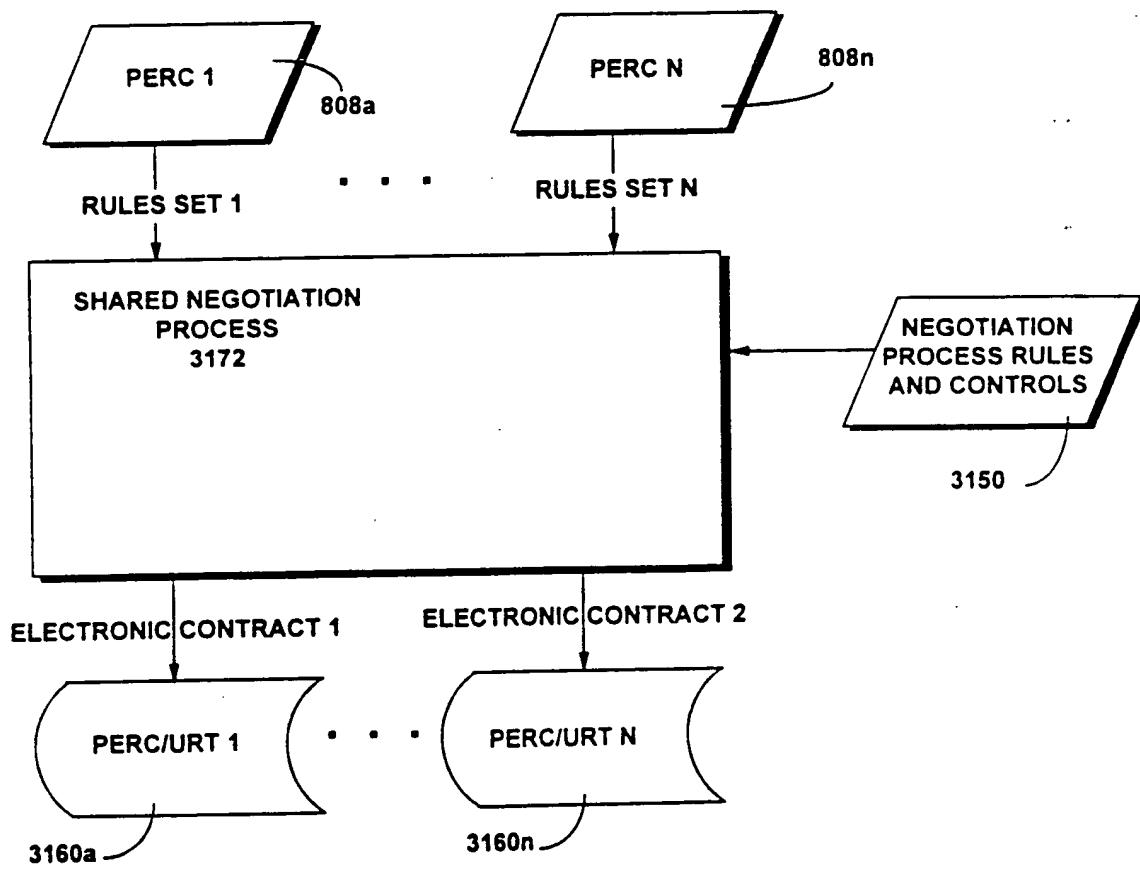


FIG. 75C



**FIG. 76A**



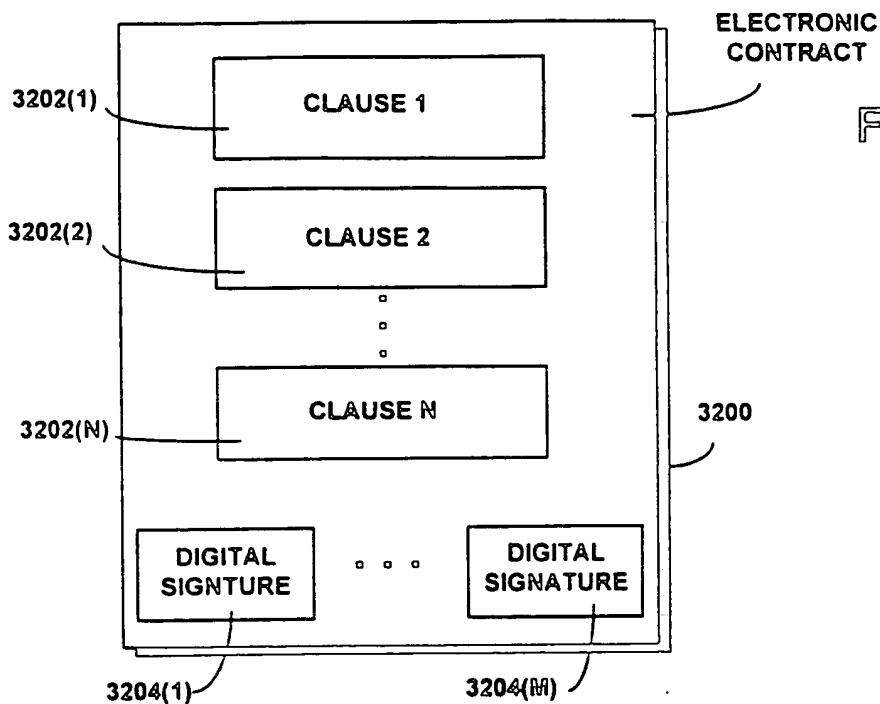


FIG. 75E

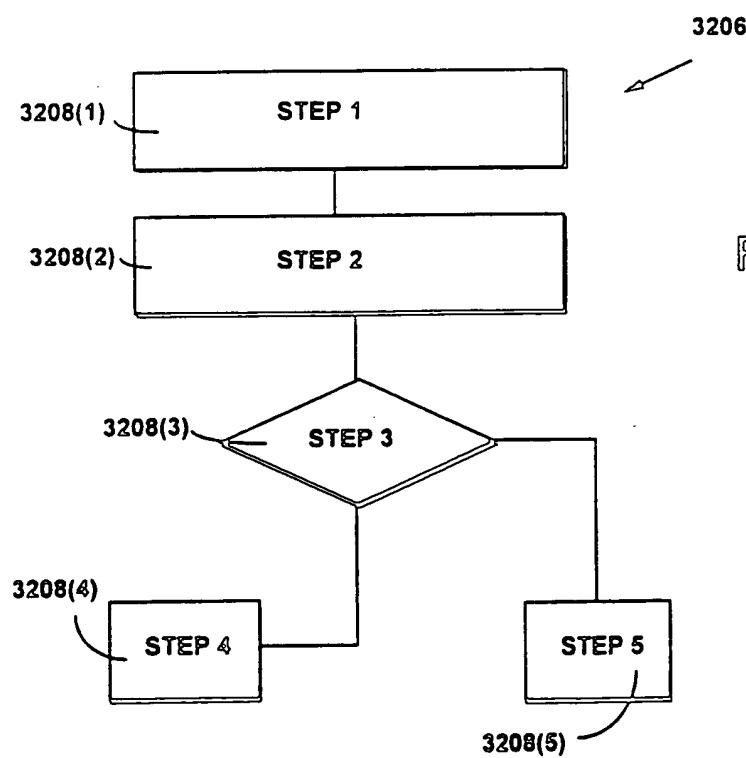


FIG. 75F

FIG. 77

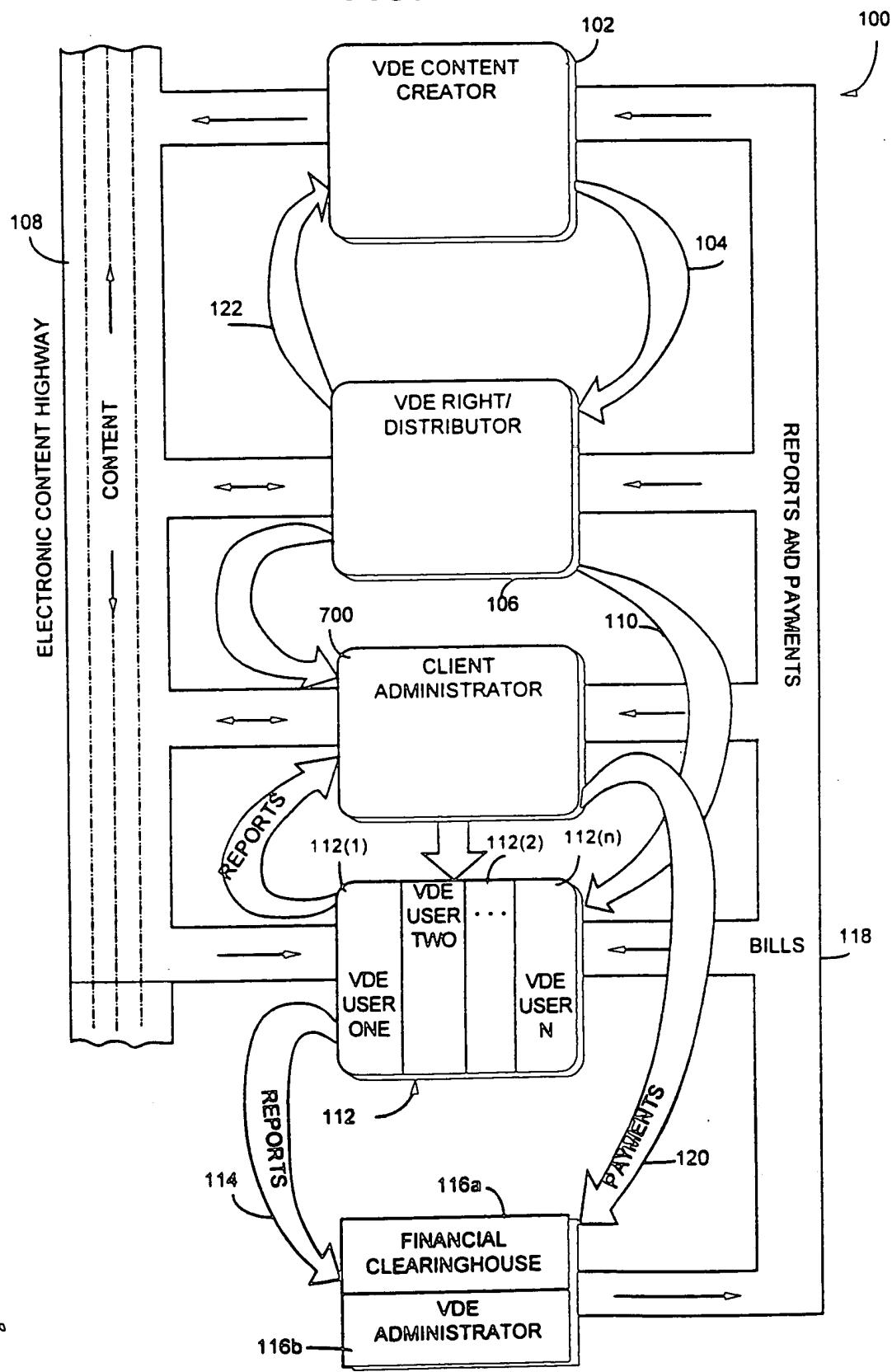


FIG. 76B

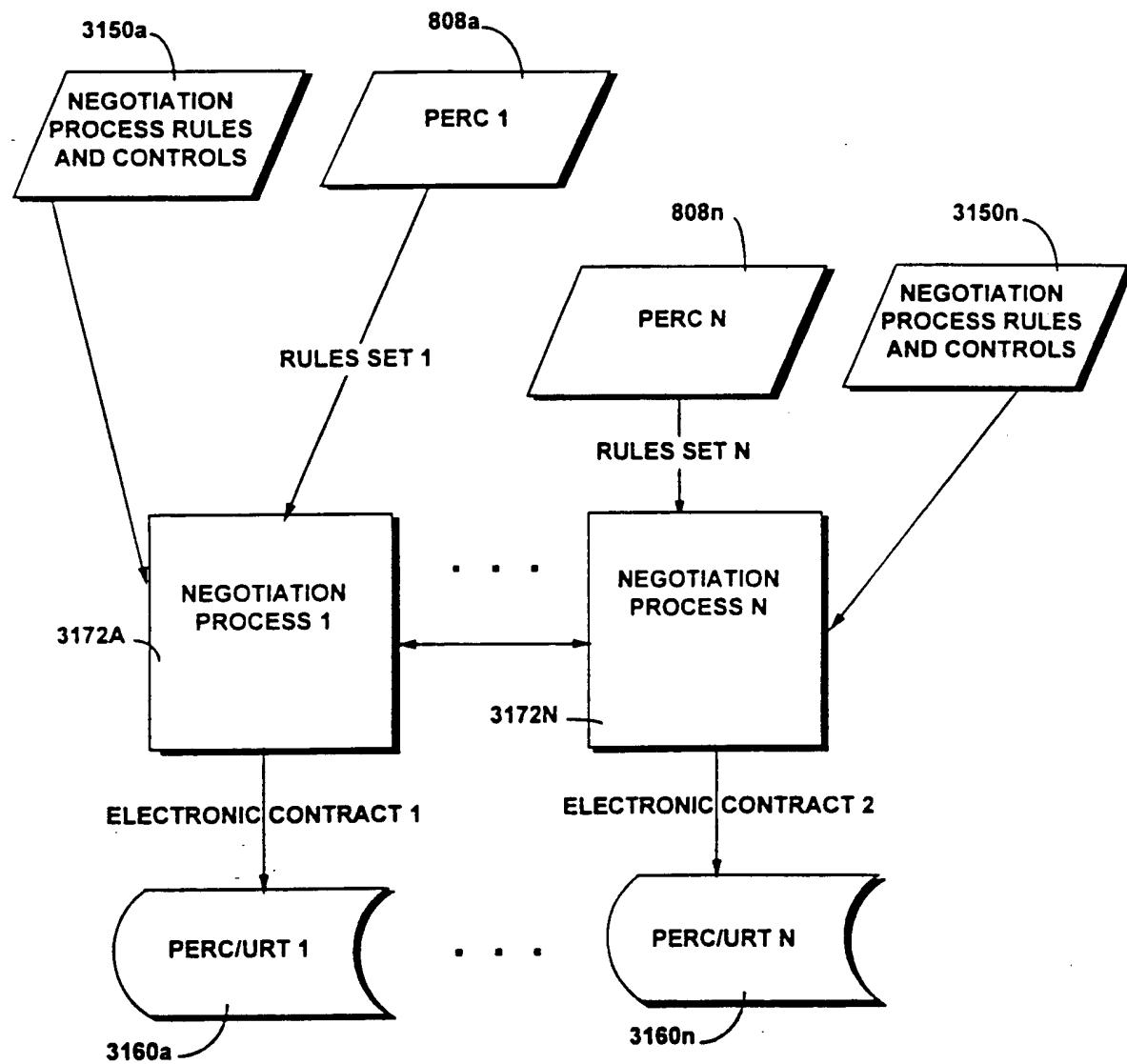
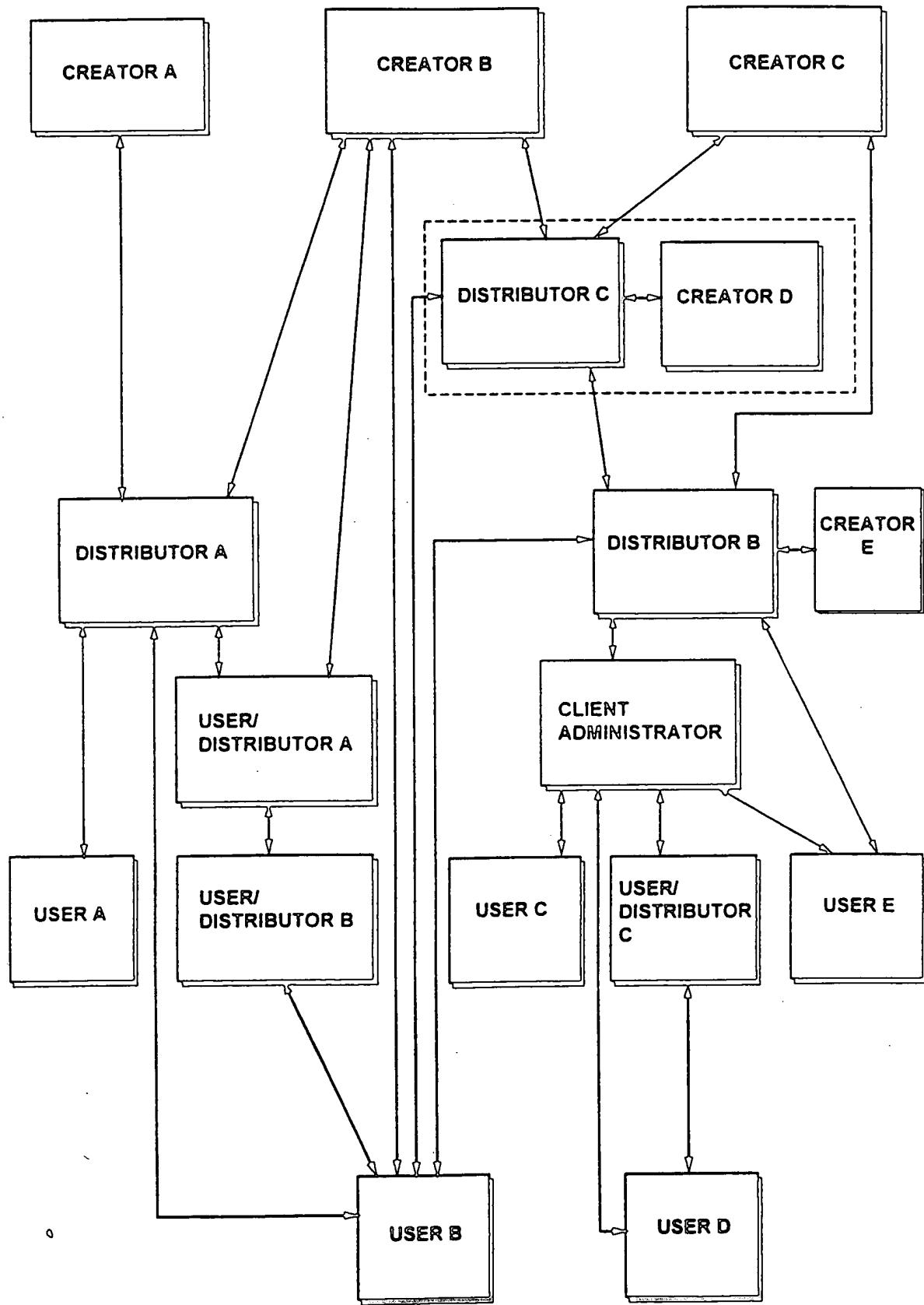
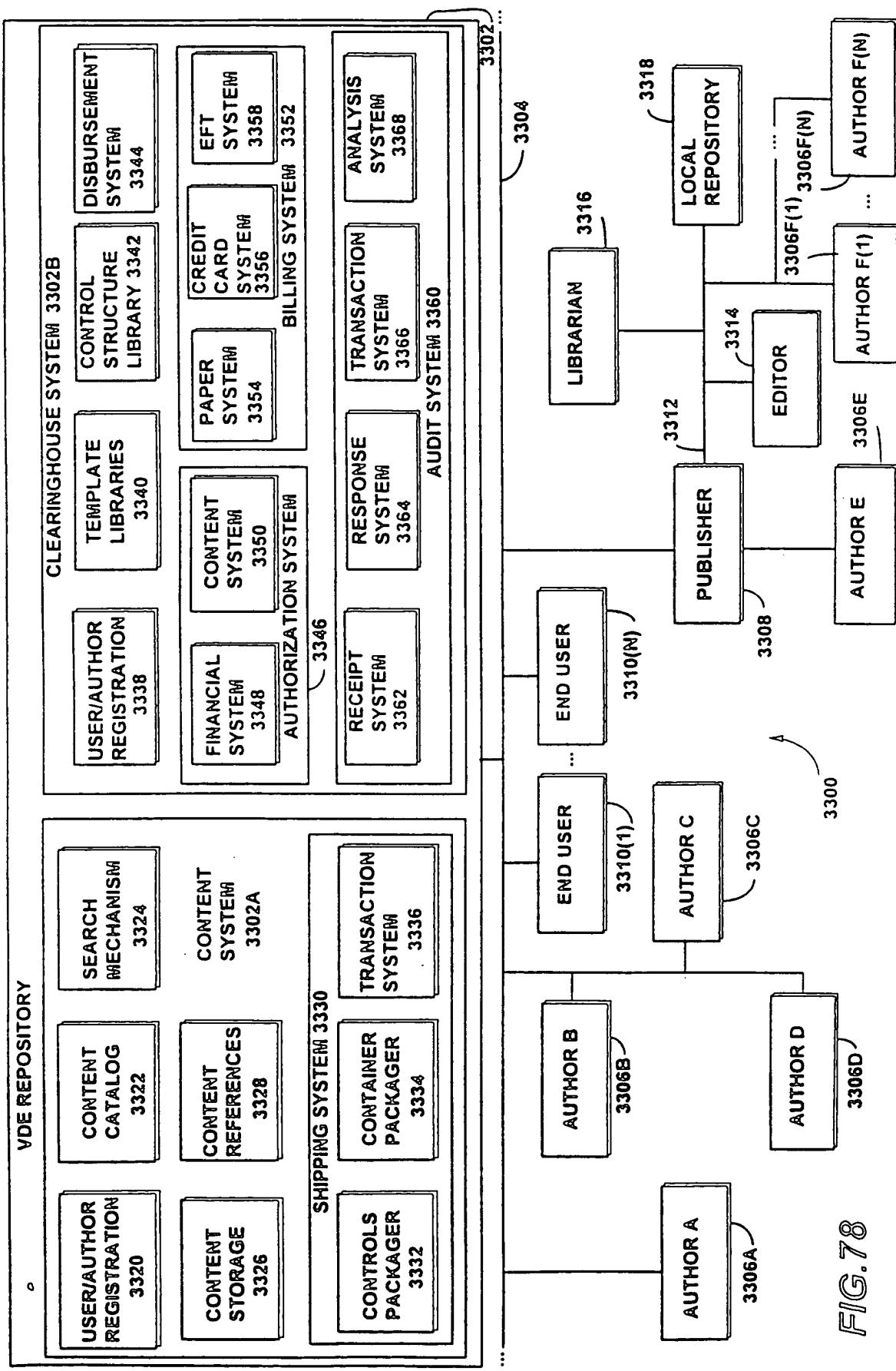
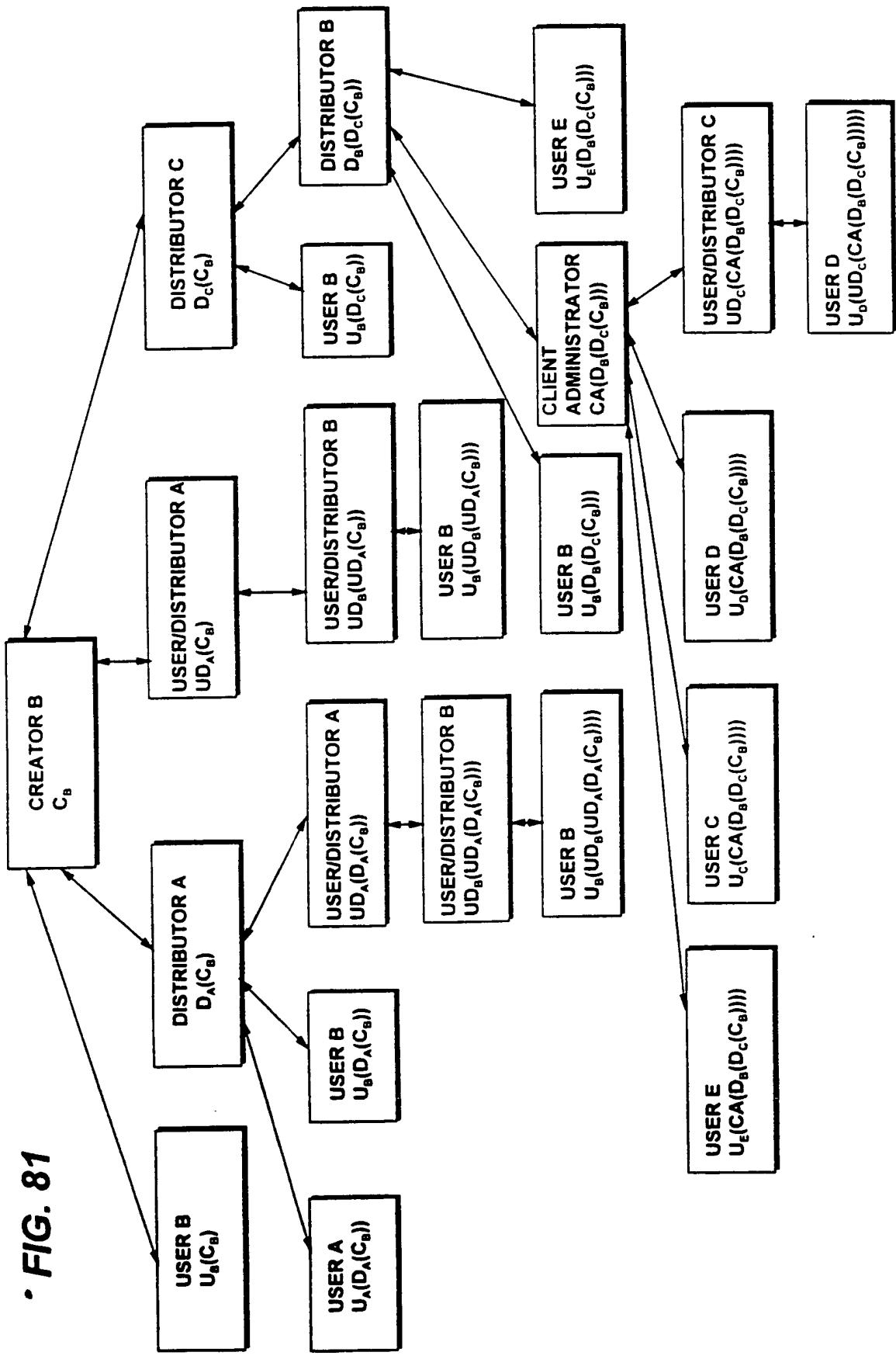


FIG. 79

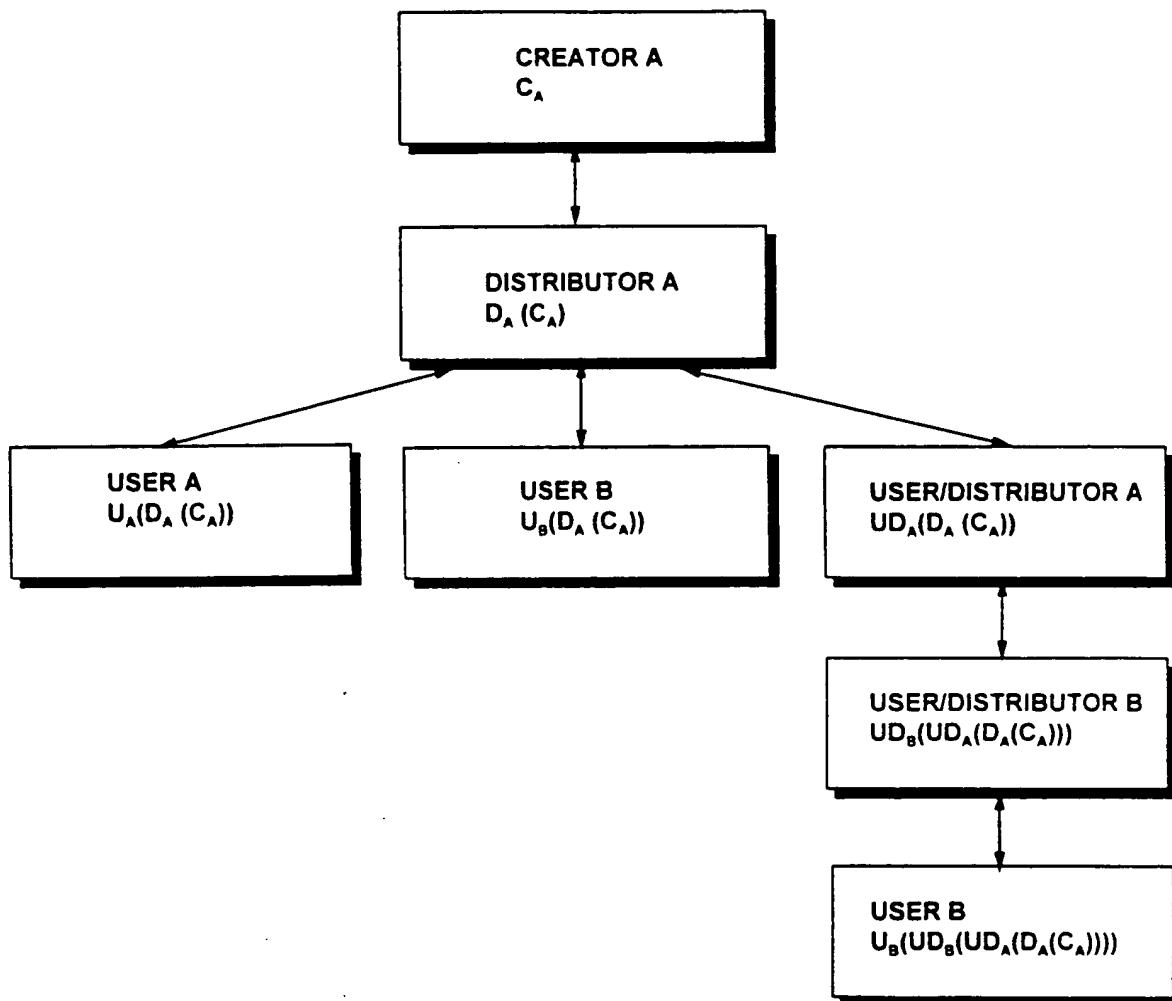




• FIG. 81



**FIG. 80**



**FIG. 83**

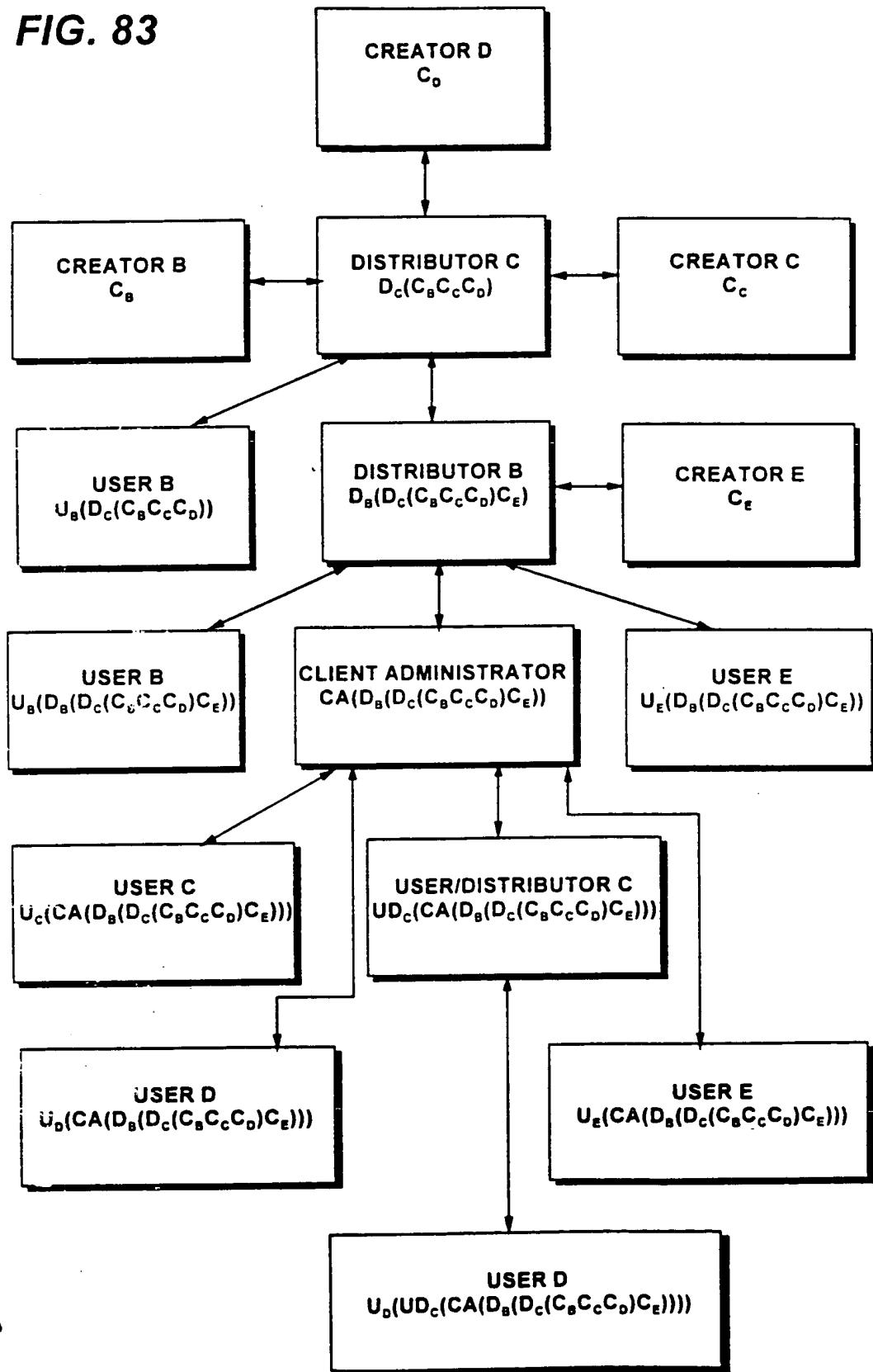
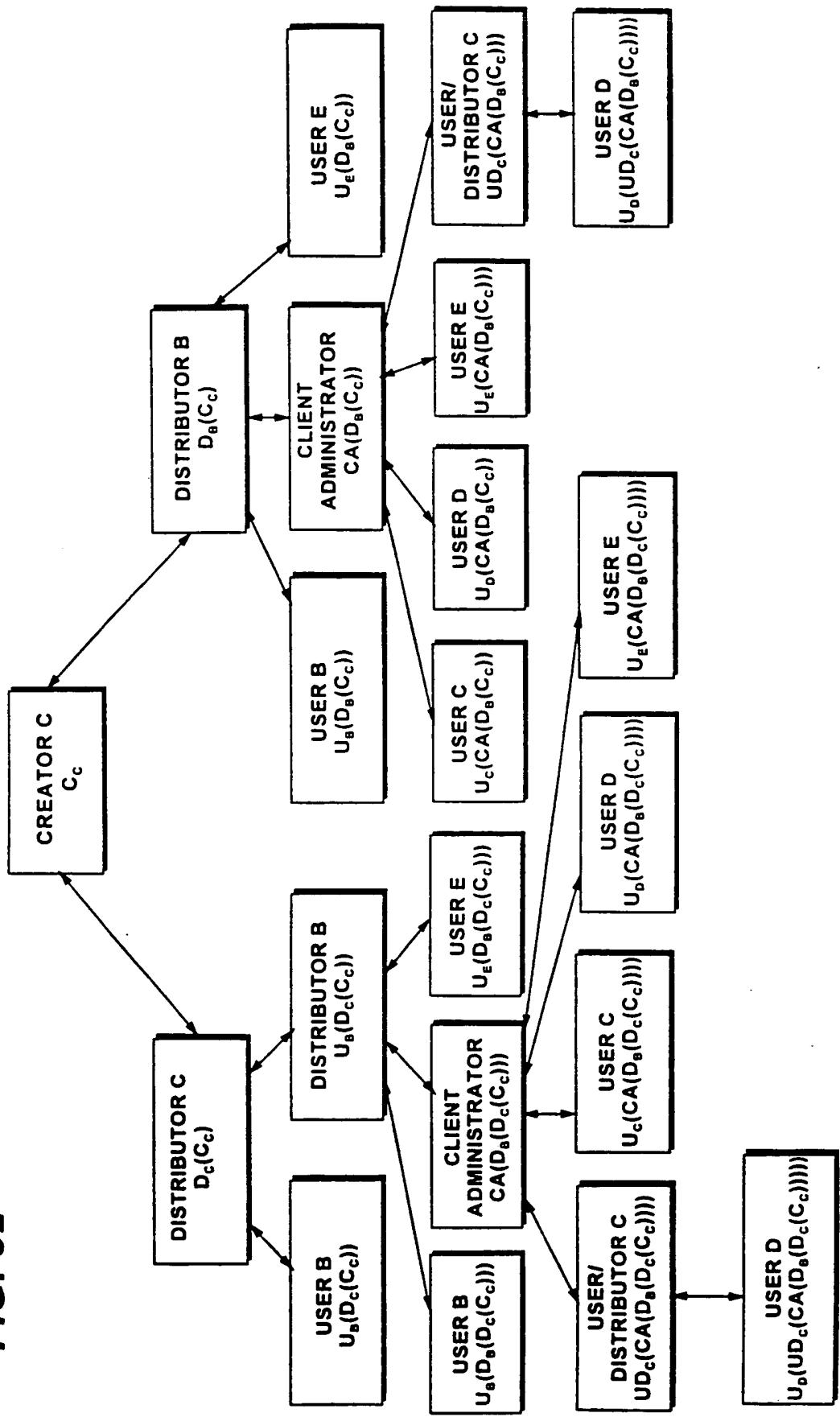


FIG. 82



**FIG. 85**

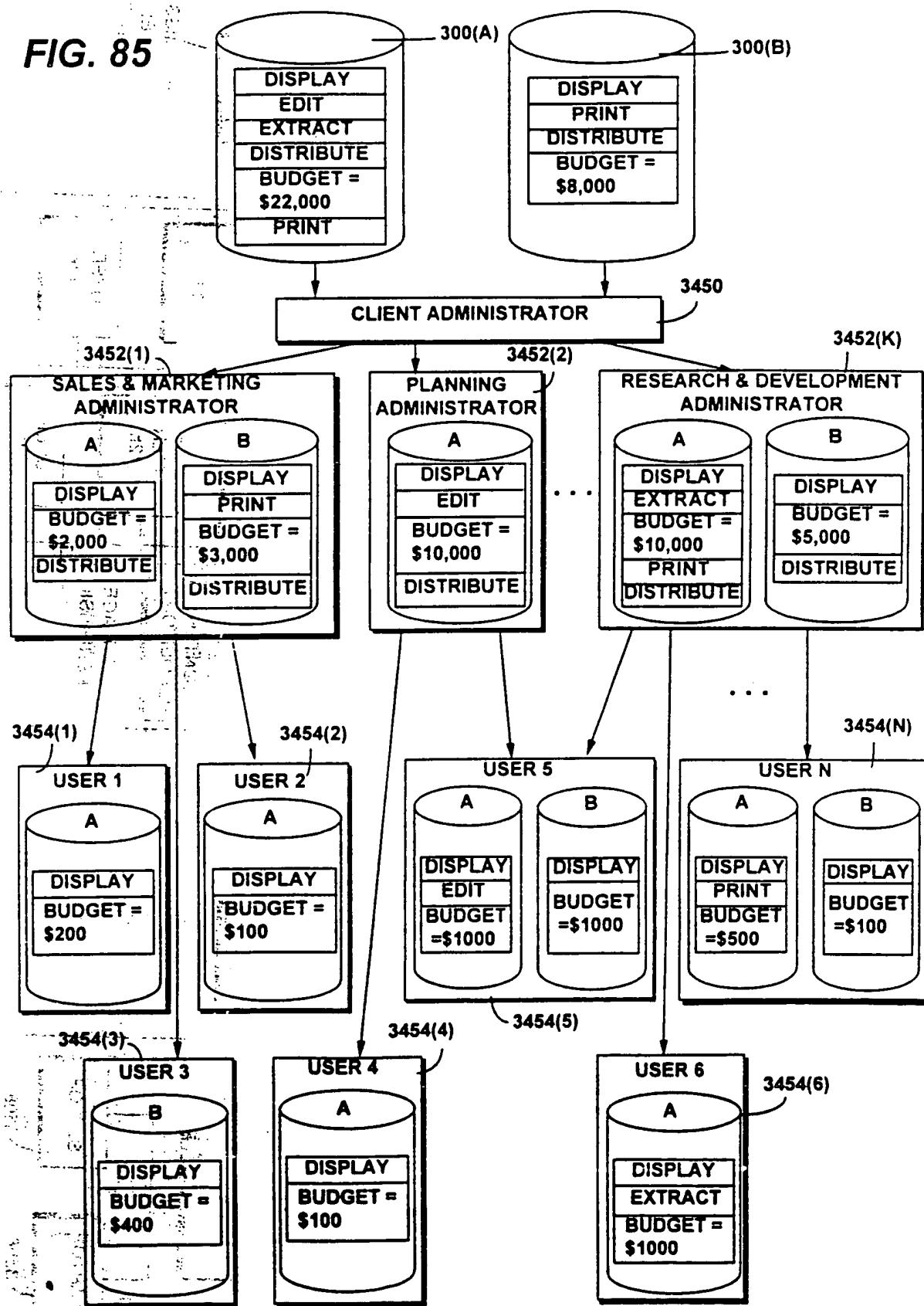
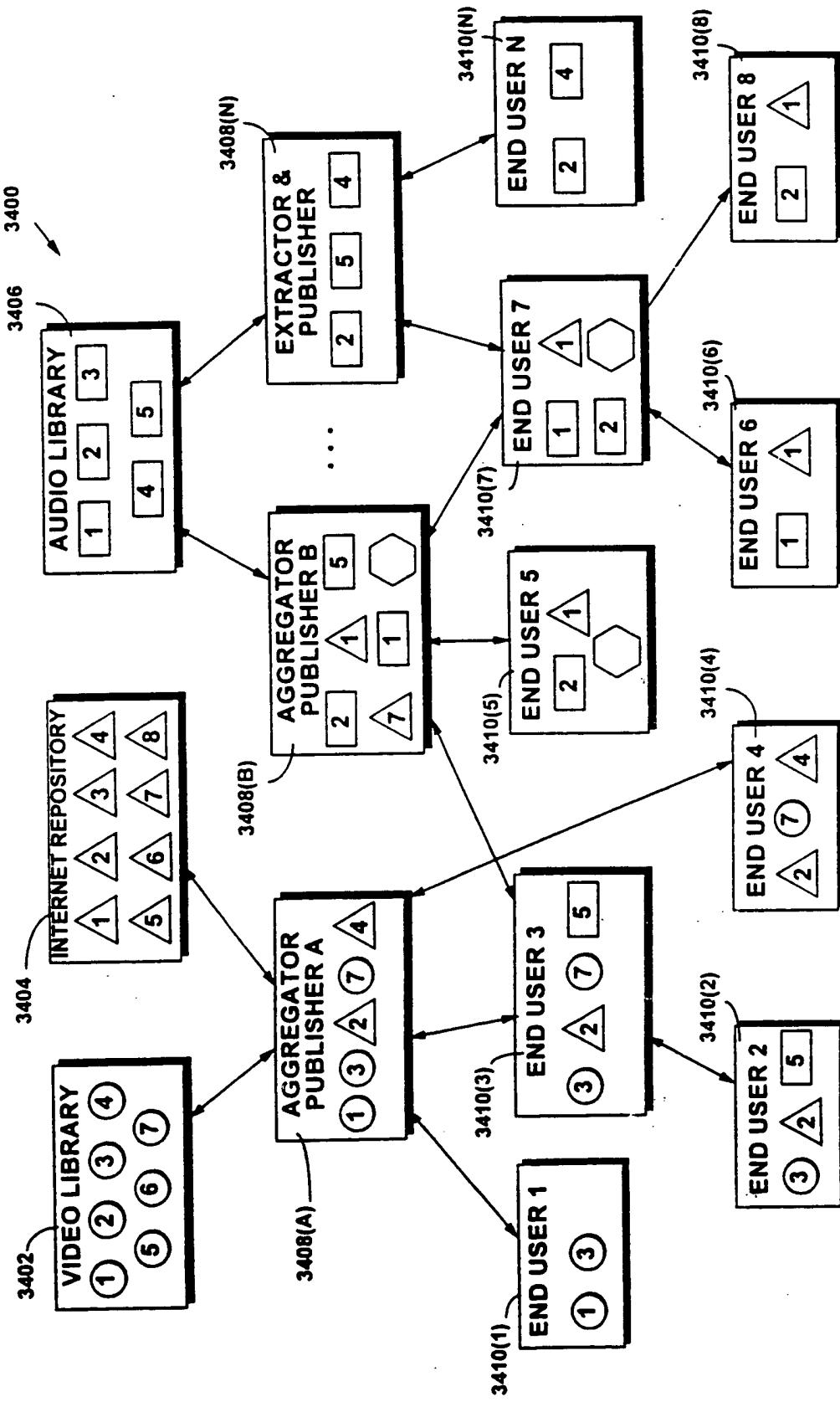


FIG. 84



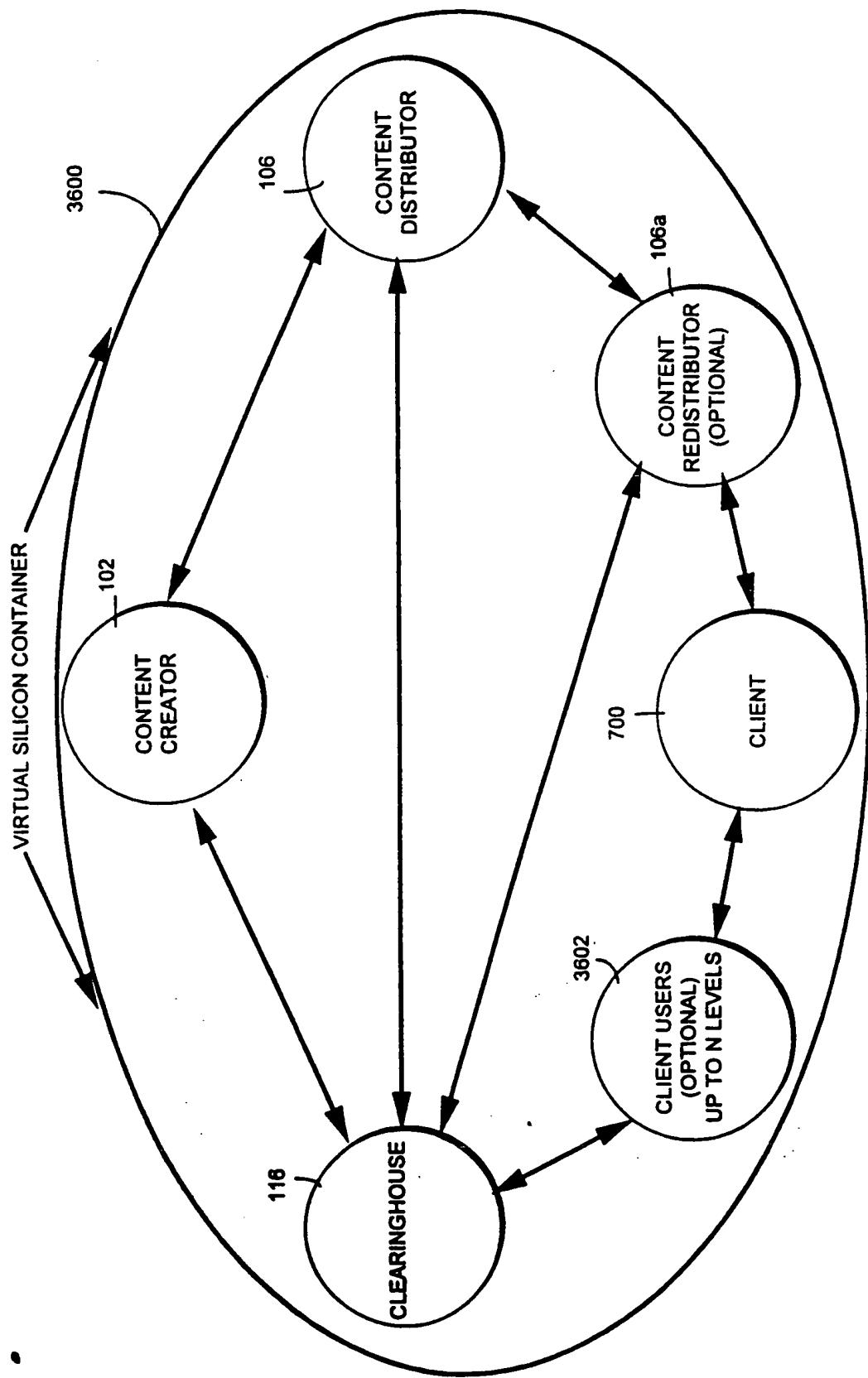


FIG. 87

86

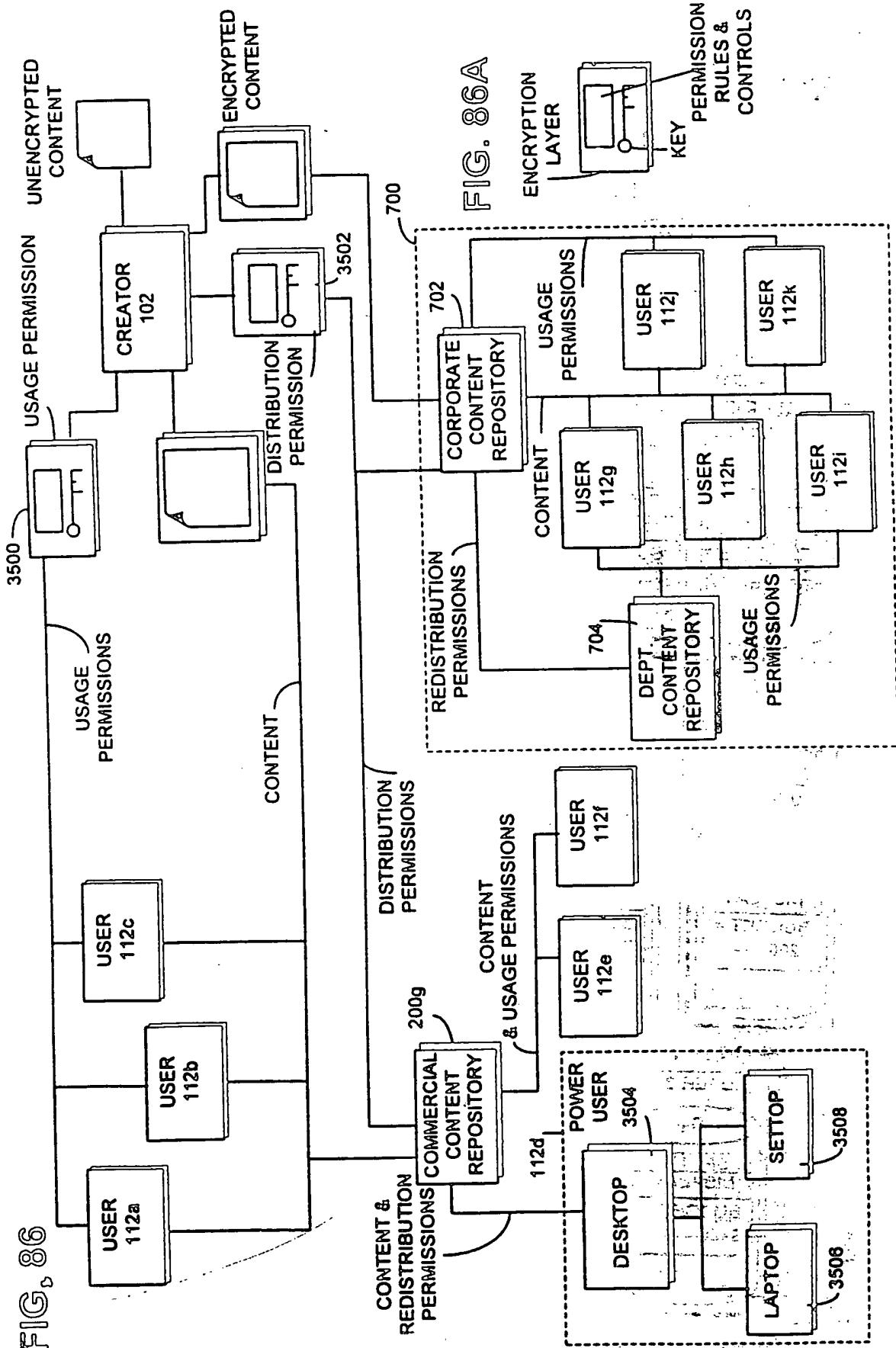
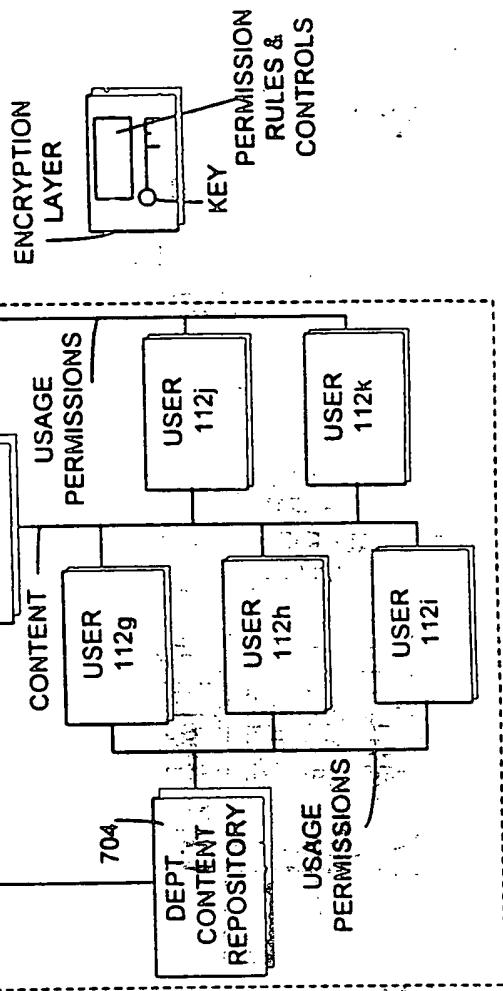


FIG. 86A



SETTOP 3508  
LAPTOP 3508